

THE
AMERICAN JOURNAL OF PHARMACY.

NOVEMBER, 1860.

PROCEEDINGS OF THE AMERICAN PHARMACEUTICAL
ASSOCIATION.

MINUTES OF THE NINTH ANNUAL MEETING.

The ninth annual meeting of the American Pharmaceutical Association assembled at the University Buildings, in the city of New York, on Tuesday, September 11th, 1860, at 3 o'clock P. M.

The President, Samuel M. Colcord, of Boston, and the Secretary, Charles Bullock, of Philadelphia, being present, the meeting was called to order.

The President having appointed W. J. M. Gordon, of Cincinnati, John M. Maisch, of Philadelphia, and Isaac Codding, of New York, as a Committee on Credentials, a recess was had during their action, and whilst the members present enrolled their names; after which the Committee reported the following delegates appointed by various pharmaceutical bodies:—

From the Massachusetts College of Pharmacy.

Thomas Restieaux, Boston,	Charles T. Carney, Boston,
Thomas Hollis, “	John Buck, Chelsea, Mass.,
E. M. Blatchford, Rockport, Mass.	

From the New York College of Pharmacy.

H. T. Kiersted,	William Hegeman,
George D. Coggeshall,	John Milhau,
Thomas T. Green.	

From the Philadelphia College of Pharmacy.

John M. Maisch,	Charles Shivers,
William R. Warner,	James T. Shinn,
George J. Scattergood.	

From the Maryland College of Pharmacy.

- John Block, Joseph Roberts,
- J. Faris Moore, James Balmer,
- Louis Dohme.

From the Cincinnati College of Pharmacy.

- William J. M. Gordon, Charles A. Junghanns,
- C. Augustus Smith, Edward S. Wayne,
- J. C. Parr.

The Executive Committee reported the names of the following persons as having been elected members of the Association since its last annual meeting:—

- Thomas Kinghorn, Brooklyn, N. Y.
- Albert J. Congden, East Greenwich, R. I.
- George J. Scattergood, Philadelphia, Pa.
- William Evans, Jr., “
- Joseph L. Moffatt, Roxbury, Mass.
- W. Pryor Creecy, Vicksburgh, Miss.
- Francis L. Gaither, Washington, D. C.
- J. B. Moore, Danville, Pa.

A list of names for membership was reported by the Executive Committee, without the usual vouchers accompanying them. After some discussion, the list was withdrawn for further consideration.

The Executive Committee then reported the following names as recommended for membership:—

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| John Butterworth, Boston, Mass. | William Saunders, London, C. W. |
| John L. Hunnewell, “ | John Benzinger, Baltimore, Md. |
| Francis Tinker, Leominster, Mass. | F. A. Weber, Rockport, Mass. |
| George B. Fish, Augusta, Ga. | Thomas Sisson, Hartford, Con. |
| Rob't C. Wardell, Battlecreek, Mich. | Levi Tower, Jr., Boston, Mass. |
| John R. Drake, Milwaukee, Wis. | Charles E. Savelle, Roxbury, Mass. |
| Joshua G. Wilbur, Boston, Mass. | Sargeant P. Coe, Portland, Maine. |
| Benjamin J. Crew, Philadelphia, Pa. | Edward H. Fernald, Boston, Mass. |
| Elijah Smalley, Boston, Mass. | Charles T. Rogers, Menton, Mass. |
| J. Lewis Crew, Philadelphia, Pa. | |

A ballot was ordered. The President appointed Joseph

Laidley and Isaac Coddington tellers, who reported that all the persons above-mentioned had been elected to membership.

The roll of members was then called and the following marked present, viz :—

Henry F. Fish, Waterbury, Con.	Henry A. Tilden, N. Lebanon, N.Y.
William Procter, Jr., Philadelphia.	Ferd. F. Mayer, New York.
T. S. Wiegand, “	Granville M. Clark, Boston.
P. Wendover Bedford, New York.	James Gordon, Boston.
James T. Shinn, Philadelphia.	John W. Shedden, New York.
W. J. M. Gordon, Cincinnati.	O. G. Dort, Keene, N. H.
Thomas Restieaux, Boston.	Samuel M. Colecord, Boston.
Charles A. Tufts, Dover, N. H.	Ashel Boyden, Boston.
Joseph Laidley, Richmond, Va.	George C. Close, Brooklyn, N. Y.
Thomas A. Lancaster, Philadelphia.	Wm. Evans, Jr., Philadelphia.
James Stratton, Bordentown, N. J.	George J. Scattergood, “
Geo. W. Weyman, Pittsburgh, Pa.	Henry Haviland, New York.
Harmar D. Scully, “	G. W. Berrian, Jr., N. Andover, Mass.
Jos. L. Lemberger, Lebanon, Pa.	Charles T. Carney, Boston.
T. R. Spence, Detroit, Mich.	William M. Giles, New York.
James Balmer, Baltimore, Md.	John H. Currie, “
Lewis T. Sillyman, Columbia, S. C.	John M. Maisch, Philadelphia.
Henry Warren, Boston, Mass.	Isaac Coddington, New York.
Edmund Dana, Jr., Portland, Me.	Frederick Hale, New York.
James T. King, Middletown, N. Y.	John Meakim, New York.
H. M. Whitney, Lawrence, Mass.	Wm. B. Little, M.D., San Francisco.
John Thomson, Sumter, S. C.	Benj. J. Crew, Philadelphia.
John Block, Baltimore, Md.	Charles Bullock, “
John Buck, Chelsea, Mass.	Chas. A. Junghanns, Cincinnati.
John Canavan, New York.	John Milhau, New York.
William Neergaard, New York.	Eugene Dupuy, “
Jos. H. Thatcher, Portsmouth, N. H.	T. W. Metcalfe, Williamsburg, N. Y.
Henry T. Kiersted, New York.	Levi Tower, Jr., Boston.
Thomas T. Green, New York.	William R. Warner, Philadelphia.
John Faber, New York.	Adam H. Wilson, “
W. A. Galatly, New York.	Robert G. Davies, Brooklyn, N. Y.
E. R. Squibb, Brooklyn, N. Y.	Wilson H. Pile, M.D., Philadelphia.
N. S. Harlow, Bangor, Me.	M. S. McConville, Worcester, Mass.
R. J. Taylor, Newport, R. I.	

The President now called for the reports of Standing and Special Committees. The reports of the Executive Committee, of the Committee on the Progress of Pharmacy, and of the Committee on Home Adulterations were read by title and laid on the table. The report on the Act of Incorporation was not presented,—the Chairman being absent.

The appointment of the committee to nominate officers being

in order, the several delegations present, in accordance with the constitution, named the following members :—

Thomas Restieaux, from the Massachusetts delegation.

Thomas T. Green, “ New York “

John M. Maisch, “ Philadelphia “

John Block, “ Maryland “

W. J. M. Gordon “ Cincinnati “

The following named gentlemen were chosen from the Association at large, by the President, and added to the committee :— William Procter, Jr., Philadelphia, Dr. E. R. Squibb, of Brooklyn, and Charles A. Tufts, of Dover, N. H.

The reading of reports of the Standing Committees being in order, the report of the Executive Committee was read by Charles T. Carney, Chairman :—

[The Committee congratulate the Association upon the prosperity which has attended its interests the past year, and give a statement in regard to the publication and issue of the Proceedings,—accounting for delay, and offering suggestions for future guidance, among which is the following resolution, which was adopted :—

“Resolved, That the Executive Committee receive from the hands of the Secretary, on the last day of the session, all papers and manuscripts with the minutes of the meeting, referred to them for publication; said manuscripts to be fairly and legibly written, and in proper state to be given to the printer; all manuscripts and papers not so delivered, to be excluded from the printed report, unless delay be granted by vote of the Association.”

The cost of publishing the last volume of Proceedings was \$913.79. The certificate of membership has been issued to thirty-nine members during the past year. Seven members have deceased,—Samuel R. Philbrick and John T. Brown, of Boston; F. A. Hegeman and James T. Maxwell, of New York City; Albert G. Palmer, of Washington, D. C.; Asbury Kent and A. M. Stevens, of Cincinnati, Ohio.]

On motion, the report as read was accepted and adopted. Mr. Fish, of Waterbury, Connecticut, requested that the motion of adoption be re-considered, to allow him to remark on a resolution embodied in the Report. The motion of re-consideration being acceded to, and the resolution having been discussed by Messrs. Fish, Procter, Squibb and Carney, it was finally adopted as it stood in the Report.

The Chairman of the Committee on the Progress of Pharmacy not being present, the Report was deferred until to-morrow.

The Report of the Committee on Home Adulterations was read by the Chairman, Charles T. Carney, and was, on motion, unanimously adopted, and referred to the Executive Committee for publication.

[This Report extends to thirty-six manuscript pages, and is chiefly occupied in the discussion of adulterations of substances directly or indirectly to be considered articles of food,—deeming such within their province as a committee on “Home Adulterations.” They begin with drinking-water in its relation with the use of lead pipe as a cause of danger to the public health; and instance cases where disease has resulted. We cannot agree that the force of the arguments adduced are of universal application. Much depends on the character of the water used, and isolated circumstances favorable to the oxidation of the pipes. In Philadelphia, the universal employment of lead pipes is sufficient evidence that so far as relates to Schuylkill water the objection does not hold.

Milk is next considered, and a series of analyses given to show the large proportion of water employed to adulterate this important item of food.

Yeast substitutes next come in for a notice, especially that now sold as a substitute for cream-of-tartar, owing its acidity to super-phosphate of lime.

Wines, brandies and liquors are next considered. The fable of “strychnine in whisky” is exploded; but the Committee find great cause to believe that extensive practice of adulteration and substitution in this class of articles of consumption exists.

Among the drug adulterations noticed in the Report we observe that of opium by leaden shot, nitrate of silver by nitrate of potassa, and chloroform by alcohol. The Report concludes with some general remarks on the importance of the reforms needed, and the necessity of the Association keeping the subject under its active supervision.]

In the absence of the Chairman of the Committee on the Act of Incorporation, no Report was received. (See page 488.)

Mr. Meakim, of New York, offered the following resolution:—

Resolved, That a Business Committee of three be appointed to take charge of any recommendations or unfinished business, and the offering of suitable resolutions for the action of the Association.

The resolution was adopted, and the Chair appointed Messrs. Squibb, Procter and Carney, to constitute the Committee.

The President now read his annual address, as follows :—

President's Annual Report to the American Pharmaceutical Association.

ASSOCIATES,—On retiring from this honorable position, it is my privilege to thank you for the kindness with which you have sustained me as your presiding officer.

I have tried to fulfil the promise made to you on assuming its responsibilities that you should have my best efforts; and the consideration and support I have received from each officer and member, is to me an assurance that my successors will find in this Association every attention and support in an honest and impartial administration of its affairs.

It gives me pleasure to congratulate you upon the very prosperous condition in which we commence the ninth year of our labors. Our rapidly increasing numbers, and the amount, variety and quality of talent now at our disposal and continually augmenting, gives promise of a bright and hopeful future; of a development commenced that shall place pharmacy with the foremost in the sanitary reforms of the day; performing an active part in removing that stigma from medicine produced by systematic overdosing,—of which Homœopathy and the prevailing medical infidelity is a counterpoise, and which, like the services of counter-irritants, having performed their uses, should be abandoned.

Your order, passed at our last meeting, directing me to forward your petition to the Secretary of the Treasury of the United States, for the removal of restrictions in publishing the importation of drugs, was promptly followed. In reply I received the following answer :—

TREASURY DEPARTMENT,
October 17, 1859. }

SIR,—In reply to your communication of the 1st instant, I have to say, that the Collector of Customs at New York has this day been authorized to continue the publication of a schedule of the importation of drugs and chemicals into New York—the names of importers to be omitted.

I am very respectfully,

HOWELL COBB,
Secretary of the Treasury.

To Samuel M. Colcord, Esq.,

President American Pharmaceutical Association.

The Treasurer, will lay before you his report of the financial condition of the Association. For the past two years the receipts have not been sufficient to publish the Proceedings, and the printers have been obliged to wait until collections were made on the dues of the succeeding year, or the Treasurer has been obliged to borrow money to pay the bills. Owing principally to the economical management of the Executive Committee for the past year, the Treasurer is enabled to report the Association not now in debt.

The policy of increasing the amount of our annual contributions for the purpose of extending our publications, and awarding prizes for papers of merit, is a subject worthy your attention at this time. Should you decide to retain the present amount of two dollars as our annual contribution, and publish only for our own members, and public libraries, the benefits to our profession, being confined more within ourselves, might operate as an inducement to membership; but, a more enlarged view would be to increase the amount and value of our publications by offering liberal prizes for meritorious articles, and a wider distribution of them.

Should the value of the Proceedings increase as it has done for two years past, the sale of the work ought to meet any deficiency in its publication. Of its sale the past year, the Executive Committee's report will give you the necessary information.

It is to be regretted that so many errors should have occurred in its publication—owing, chiefly, to imperfect manuscript: in one instance to derangement of type before printing. Doubtless some errors occur in our list of members, although very carefully revised. Omissions have heretofore been liable to occur in consequence of the roll being made up from the records and memorandums of the Secretary, Executive Committee and Treasurer.

Some course should be adopted by which only finished papers should be presented and go directly to the Publishing Committee at the close of the meeting.

If the movers of all resolutions, orders, motions and amendments would put them in writing, it would be a great assistance to the Secretary, and enable him to have an accurate record, *approved* for the Publishing Committee at the close of the meeting.

I can see no reason why our "Proceedings" should not be published within thirty days after adjournment.

The Executive Committee will lay before you a report of their labors. The amount of time and care required by the Chairman of this Committee would seem to require the employment of some suitable person as an assistant in editing the "Proceedings;" but, as yet, no such expense has been incurred, and the amount of labor gratuitously performed by the Chairman of this Committee is deserving the warmest thanks of this Association; and any suggestions made by this Committee are deserving of great weight in your deliberations, as the actual working of the Association, during the recess, is mainly confined to them.

Next year will complete the first decade of our existence as an institution. I would recommend the appointment of some person to make a *general index* of all our previous publications, to be published with our next volume.

COMMITTEE ON THE PROGRESS OF PHARMACY.—It has occurred to me that the labors of this Committee cover so wide a field, that to divide its duties

would give greater value to the result of its labors. I would not advise to alter the construction of the Committee; but merely assign a separate portion to each member of the Committee, with the addition of others, if deemed necessary. Each to bring in a separate report,—the object sought being to get fuller and more concise reports upon each subject; collecting special information by personal effort, which would not be attempted, if to be collated by one individual of a committee.

ACT OF INCORPORATION.—The committee appointed to procure a charter, have paid attention to the subject. I am not aware of the nature of their report to you; but, from the information I have, I should infer that no act of incorporation granted to us by the General Government would be acceptable. Congress does not grant charters for such purposes,—leaving such matters for the action of individual States; unless as legislating for the District of Columbia, we would take a local charter subject to the laws of the District, and having our head-quarters in Washington to a degree that would not be acceptable. In fact, the present sphere of our operations does not seem to require a charter; but, from the interest taken in our objects by all dealers in medicines, it seems to be only a question of time as to our future operations. One of our chief aims should be to give a uniform system of instruction throughout the country to those engaged in pharmaceutical pursuits, or as druggists; and, although our present organization is accomplishing much good—perhaps as much as can be expected at present—yet who believes that the scope of our efforts is to be confined to its present limits, when there is so much to accomplish, and so wide a field to cover? In process of time it is probable there will be made—if the time has not already arrived to make—some provision for our professional education, on a more diffusive, practical and uniform scale than at present exists. There are but few cities in the United States at present that can maintain a school of pharmacy, for various reasons,—one of the principal being a want of practical professors of pharmacy of sufficient influence to secure the attendance of a remunerative class; and, to some extent, the same exists with other professorships required in the same course of instruction. The want of such instruction is daily becoming more apparent; and the increasing interest manifested in pharmaceutical education seems to indicate a time not far distant when such schools will flourish. Strangers of good professional qualifications and repute would be more likely to succeed in such efforts than those educated in the immediate neighborhood of their classes.

Taking this view of the subject into consideration, a charter with educational powers, conferred from some State, encouraging such efforts, would answer our purpose better than one from the General Government. We could then, in addition to encouraging local schools and colleges of pharmacy, organize a learned faculty on a uniform national basis; conferring on them the power of examining candidates and conferring degrees, granting diplomas and certificates of qualification. The appointment of professors

could be made from the professors of any colleges or schools already organized, and as many could be appointed as would be required from time to time. Lectures and courses of instruction prepared by them and approved, could then be at the service of any number of pharmacutists or assistants who would properly organize to receive them, by paying only the expense of their delivery,—leaving it at their option to choose from any of the professors thus appointed, whose services could be secured at the terms mutually agreed upon. It would then become an object for men of talent to qualify themselves for the office and pursue it as a business, by having a sufficient number of such classes, especially if the professors were connected with laboratories, botanical gardens, &c.

Mr. Henry F. Fish, at our last meeting, proposed to have all our annual meetings held in New York, or New York, Boston, Baltimore, Philadelphia and Washington; having a permanent Secretary and headquarters in Washington, acting in some measure as a scientific association; but, as our settled policy has been to meet in as many different cities as is possible to secure a full attendance, for the benefit, it may be, to our profession in different localities, as well as to increase an extended influence, usefulness and roll of members. The proposition met with little or no favor. Had the proposition been understood to embrace the idea of establishing a central office, for the transaction of the business of the Association; increasing it by the collection and distribution of specimens, papers and general information in pharmaceutical matters; the resolution might have been more carefully considered, or referred to a committee. Should it ever be deemed advisable to establish such a central office and employ a permanent Secretary, I can see no good reason why our annual meetings may not be held in different places as at present,—unless the meeting should prove to be burdensome by reason of any impression existing that it is *necessary* to entertain the Association expensively. Should the practice of former years continue of expensive complimentary banquets, it must operate against securing a united action of pharmacutists in some places where we should like to meet, and possibly render the meetings objectionable in many places. There is no reason why any place in which our meetings are held should provide more than suitable accommodations for the meetings alone; and on many accounts it would be preferable to reverse the custom, and if any entertainment is given, let it be done by the more numerous strangers to the local society, or simply a social gathering of our own members and invited guests, by those of us who have a taste for such kind of thing. In a quiet way, a social gathering may be productive of much good; acquaintances formed in this way often ripen into lasting friendship; and friendship and good-feeling created in the direct line of our occupation, cannot but operate to secure that concert of action for which we are banded together.

COMMITTEE ON HOME ADULTERATIONS.—In view of the importance of this Committee, and the interest manifested by the public outside of our

profession in its reports, I deem it advisable to continue the Committee, and make a division of the subject for separate reports. For instance, one division might embrace those articles of use as component parts of our daily food,—treating them as subjects of the *Materia Medica*, or on sanitary grounds; another division might embrace the preparations of the *Pharmacopœia*; still another, articles of *Materia Medica*.

The publication of the analysis of most articles as commonly found in commerce, together with a statement of what they should be, would certainly improve the standard of commercial quality, if only by comparison. To what extent it is advisable to publish the names of adulterating parties, I leave it for the committees to report and the Association to decide. The reports of these committees would be much more valuable if members would report cases and send samples for examination to this Committee, who have solicited and been anxious to receive them.

I cannot too strongly urge upon you the duty as well as *policy* of making no compromise with adulterations and adulterators. If there is any sin that should be exposed and punished, it is that which lurks unseen and works mischief and death upon innocent parties.

PHARMACOPŒIA.—At our last meeting, your Committee on the *Pharmacopœia* made their final report. The result of our labors was presented to the *Pharmacopœia* Convention and accepted; and, although as an Association we had no delegation in that body, it is gratifying to know that the apothecaries were well represented, and that a majority of the Committee, appointed or elected by the Convention for the revision of the United States *Pharmacopœia*, are members of this Association, and those whom we should consider most suitable for the purpose. It should, therefore, be considered and upheld as a fair expression of the views of pharmacutists throughout the United States, more especially as the committee of revision, I understand, are acting very harmoniously; and we may expect in due time a national work that should carry weight and authority with it sufficient to do away with all private formulæ for officinal preparations. It is to be hoped that the *Pharmacopœia* will be a work of fixed and available standards; and that all who follow the profession of pharmacy will strictly conform to it, that we may have one uniform standard throughout the country, no matter how great a change it may make in the preparations that have been previously in the market.

It is proposed to publish a large and cheap edition, to give it a wide circulation, and we may reasonably expect that this Association, in its individual capacity, will do its utmost to establish it as soon as published, as the only authority for preparations that have an officinal name.

SALE OF POISONS.—Owing to numerous cases of poisoning, exciting great public interest of late, the attention of legislation has been attracted to this subject, and it is surprising to notice how weak and inefficient have been all the laws to remedy the evil. The difficulty of framing a law to protect the community, accommodate the public, and at the same time be equitable

to the dealer, is very great; and I have little confidence that any law could be passed to protect the public against designed cases of poisoning. Yet, a judicious law, regulating the sale, might greatly reduce the number of accidents. Several States of the Union have passed laws relating to poisons, but none, that I have seen, are at all calculated to remedy the existing evils. It is to be regretted that our profession is so poorly represented in the law-making and law-executing power; inquests and juries have usually been alike deficient in pharmaceutical knowledge when such cases are under legal investigation. It would be well if we could secure a greater amount of legal influence as a profession, by paying more attention to the subject, as no class of business is so poorly represented in legislative assemblies as ours.

The great difficulty of legislating upon this subject, is the great number of articles, the large amount of sales, variety of their uses, the classes of people to whom they are sold, and the frequency of the sales. To some extent this subject has received the attention of this Association, but it has never been arranged in such shape as to facilitate efficient legislation, or a plan submitted for general adoption, to meet required wants in regulating the sale. I would therefore recommend referring this subject again to a committee, with instructions to report upon the best plan for the safe keeping, labelling, selling, dispensing and registering sales of poisons: also, to set forth specific principles on which to frame a suitable law for regulating the traffic, with a view to accommodate and protect the public, as well as pharmacutists and druggists.

SUNDAY TRADE.—The custom of pharmacutists transacting business the same number of hours on the Sabbath as on other days of the week, is at present receiving the attention of our profession in many of the larger cities, and it is generally conceded that six hours on the Sabbath would be sufficient time to supply all the medical wants of the community in ordinary times of health. It is due to a proper observance of the Sabbath that our stores should be closed during the usual church services, it is also proper to notice the fact that we have no more legal right to transact business or labor on Sunday than any other class of citizens. As one of the chief objects of our organization is to deliberate for those places that contain but few apothecaries, where there is consequently but little concert of action, I would recommend the adoption of a suitable resolution as the sense of this Association upon this subject, embodying proper recommendations for general adoption.

Members will find the preface to each volume of Proceedings, by the Executive Committee, to contain information, explanations and suggestions of interest up to the time of its publication, worthy the attentive consideration of each member.

Gentlemen, the subjects to which I have drawn your attention, are those which to me appear most important to present at this time, in compliance with the requirements of our Constitution; but permit me to make a few remarks on our vocation as dealers in drugs and medicines. Our roll of

members includes persons engaged in every department of this business, each of us anxious to contribute what he can for the general advancement of the whole; our ultimate object being the most honorable and surest way of securing to ourselves a just pecuniary reward, at the same time we are doing our utmost for the greatest benefit to the public. Our customers, or rather I may say the consumers, as a general thing, are unacquainted with the properties of the articles we are daily dealing out to them, and consequently rely upon us to protect them, and supply wants unlike any others of which they may be capable of judging for themselves; the commerce of our vocation is therefore unlike any other, inasmuch as the producer or vender is the party who knows the value of the article, and not the consumer; but the laws of commerce are the same in all commodities, and are regulated by the supply and demand.

Unquestionably our mission as an Association is to create a demand. On sanitary grounds the public good requires us to create a demand for pharmaceutical qualifications of a high grade of character, as well in morals, care and attention to business, as in practical attainments, in judgment and manipulation; this can best be done by informing the public as to the value of such services, and the danger of sustaining a dishonest and ignorant competition.

As to the medicinal articles in which we deal, it is clearly our duty to *create a demand* for pure medicines of reliable quality, as the only safe articles for our patrons to purchase; we should therefore strive to create a demand for this class of goods in preference to the medium and lower grades of quality. As traders, the temptations are as great in our profession as perhaps any other; the public does not seem to comprehend that commerce furnishes as many grades of quality in drugs as among other articles, and that competition in price is fully equal to competition in quality; that it is easier for the time to meet the former than the latter. Now the law which governs commerce, is to furnish any article for which there is a demand, and in my judgment those who deal in medicine prefer to furnish pure articles at the same profit; there would therefore arise no opposition to improvement in *quality* from *any* class of dealers, unless from adulterators, and those who delight to offer inducements in price at the expense of quality. The evils of such competition have to be met by all honest men under all circumstances.

But aside from our *duties* as guardians of the public health, and to our patrons who confide in us, is it *policy* for any of us to act otherwise in any transaction, than, by a conscientious discharge of duty, to protect our customers even when they do not appreciate it, to yield to no temptation for the sake of present gain, and to acquire a character for integrity as an investment equal to capital?

In many respects our characters as pharmacutists are, with the public, like those of physicians, in proportion to our integrity, judgment and ability; and a large portion of the community prefer to employ the services of a high-priced to a low-priced physician or pharmacist.

I hold it true in all trading at retail, that the confidence of the community is fully equal to the capital invested; but in our business, of the transactions on which we are judged, the unknown is as tenfold to the known, and the penalties and emoluments are in like proportion, either in the breach or observance. The number of business hours required of us, our broken Sabbaths, our enervating summer toils, and nights of broken rest, warn us that no one man by personal application can be responsible for all that is done in a drug store, of even very moderate business; it must therefore be the store, as well as the proprietor, that is to merit and sustain a reputation, and the assistants come in for a far greater share of it than is generally supposed. Now let a young man on entering this business sit down and carefully calculate prospects and chances, lay out his plans for life, where he is to get his amusements, who are to be his friends, how manage for recreations, how perform his duties to society socially, how cultivate tastes for all that is true and beautiful; in short, how reconcile his duties as an apothecary, with his necessities as a man. The way in which these questions are answered, and the path he strikes out to pursue, are what is to fix his destiny. If he looks upon his business as merely mechanical toil, seeking to do the least for the most money, and hourly longing for the next moment he can get to spend in amusement outside the business, dreading a return to it, avoiding and postponing those things which must be done, and ought never to be left undone, cultivating disgust for the daily routine of duty, and despising all non-sympathizers, sad must be his life to himself, and profitless to the community; but should his heart be bent on a life of usefulness, a determination to explore and master the mystery and detail of the business, and acquire confidence to stand before his customers as one that can answer their wants equal to any competitor, and secure a list of personal friends from among them; should he explore the sciences and investigate theories connected with his business, as amusements or pleasures, storing up knowledge for truth's sake, cultivate the acquaintance of those in similar pursuits, and make friends from among the stars of his own profession, and intimate acquaintance with the records of those denied a personal acquaintance; society would seek him for his worth, the mortar would yield him pleasure, the graduate would be to him a cup of happiness, and the outside world would form to him a concentrated variety of the same happiness which other people enjoy. This view to many may seem all poetry; but let any one look around and from the past judge of the future, who of those now in business, or retired, are the successful ones; let him inquire of their past history, and compare it with their present standing in all respects in the community, and he will find that virtue brings its own sure reward; that to plough deep, to sow good seed early, to weed out and prune well, are some of the best means to ensure a good harvest; that to cultivate a taste for our profession for pleasure as well as profit, to make all acquaintances, amusements, recreations and associations, harmonize with our routine of business, to give proper attention in just proportion to our religious and moral wants, our civil and political duties, all things

necessary to our mental and physical development, our pecuniary interests, our duties to our patrons and our profession, are the most sure means to retain health, and acquire wealth and happiness; and last, though not least of promoting the objects and deserving the thanks of the American Pharmaceutical Association.

SAMUEL M. COLCORD.

On motion of W. A. Gelatly, the Address was accepted, and referred to the Business Committee for its action.

On motion of Mr. Buck, the Association adjourned till Wednesday morning at 9 o'clock.

Second Session.—Wednesday, September 12, 1860.

The Association was called to order by the President at near the time adjourned to.

The minutes of yesterday were read and adopted.

The Executive Committee reported the following named persons as recommended for membership, viz:—

O. F. Cawthon, Mobile, Ala.	E. L. Johnson, New York.
C. F. G. Meyer, Fort Wayne, Ind.	John Lyman, Chelsea, Mass.
Peter D. Leys, Brooklyn, N. Y.	Edmund Bigelow, Springfield, Mass.
S. S. Hubbard, “	James E. McDaniel, Baltimore, Md.
Richard Forester, “	J. A. Wolf, Pennsylvania.
George C. Leys, “	John McDonald, Brooklyn, N. Y.
Samuel J. Billings, New York.	Arthur Leitch, St. Louis, Mis.
Benj. F. Stacey, Charlestown, Mass.	C. H. Dalrymple, Norristown, N. J.
W. E. P. Baylis, Brooklyn, N. Y.	C. M. Whildon, Pittsfield, Mass.
William J. Watson, New York.	William J. Darbey, New York.
William M. Giles, “	Wm. G. Stephens, Yonkers, N. Y.
John Carle, Jr., “	Jas. E. Cunningham, Pittsburg, Pa.
Isaac M. Sands, “	H. M. Pettit, Pittsburg, Pa.
E. E. Knapp, Norwalk, Con.	Theodore Moitz, Pittsburg, Pa.
Jabez H. Hazard, New York.	Theodore Schumann, New York.
S. G. Welling, New Rochelle, N. Y.	Paul Balluff, Brooklyn, N. Y.
William E. Hagen, Troy, N. Y.	Otto Laist, New York.
Jesse Weaver, New York.	George G. Porter, New York.
George W. Southwick, New York.	George E. Sheils, “
John H. Pope, New Orleans, La.	William Ball, “
Richard J. Owens, Brooklyn, N. Y.	Henry Bower, Philadelphia, Pa.

A ballot was ordered, and Messrs. Laidley and Coddington, acting as tellers, reported the election of all the persons named in the list.

The following members, not present at the previous sittings, signed the register, viz:—

H. H. Burrington, Providence, R. I.	C. B. Guthrie, Memphis, Tenn.
Edward Parrish, Phila. Pa.	S. K. Norgrave, Pittsburg, Penn.
John M. Clark, Milledgeville, Geo.	C. L. Case, Brandon, Vt.
John G. Cook, Lewiston, Me.	E. E. Knapp, Norwalk, Ct.
John Jackson, Knoxville, Tenn.	John Carle, Jr., New York City.
B. F. Stacey, Charlestown, Mass.	Paul Balluff, Brooklyn, N. Y.
Fred. L. John, Phila., Pa.	W. B. Gardiner, New York City.
Charles H. Eggert, "	W. E. P. Baylis, Brooklyn, N. Y.
J. G. Wilbur, Boston, Mass.	John A. Dix, New York City.
A. E. Richards, Plaquemine, La.	William J. Watson, "
C. F. G. Collins, Beloit, Wis.	

The Executive Committee stated that other names for membership had been reported, for some of which they had received no vouchers, and others had been objected to by some of the members of the Association. At the suggestion of Dr. Squibb, the names were held over by the Committee to obtain further information concerning them.

The Committee on Nominations now reported the following names for Officers for the ensuing year, viz:—

For President—HENRY T. KIERSTED, of New York.

1st *Vice President*—WILLIAM J. M. GORDON, of Cincinnati.

2d " " WILLIAM S. THOMPSON, of Baltimore.

3d " " THEODORE METCALF, of Boston.

Recording Secretary—JAMES T. SHINN, of Philadelphia.

Corresponding Secretary—P. WENDOVER BEDFORD, of New York.

Treasurer—ASHEL BOYDEN, of Boston.

Executive Committee—WILLIAM PROCTER, Jr., of Philadelphia; CHARLES A. TUFTS, of Dover, N. H.; JAMES BALMER, of Baltimore; GEORGE W. WEYMAN, of Pittsburg, Pa.; JAMES T. SHINN, of Philadelphia, *ex officio*.

Committee on Progress of Pharmacy—JOHN M. MAISCH, of Philadelphia; EDWARD S. WAYNE, of Cincinnati; CHARLES T. CARNEY, of Boston; JOHN MEAKIM, of New York; P. WENDOVER BEDFORD, of New York, *ex officio*.

Mr. Boyden having expressed his desire to be excused from re-election to the office of Treasurer, on motion of Mr. Stratton his resignation was accepted, and the thanks of the Association were voted for his past services.

The nomination for Treasurer being again referred to the Committee, they reported the name of HENRY HAVILAND, of New York.

A ballot was ordered for the officers as nominated. Messrs. Meakim, Laidley and Coddington, acting as tellers, reported the election successively of the President and Vice Presidents; when on motion of Edward Parrish, the President was requested to deposit a ballot for the remaining officers, whereupon the tellers reported their election.

The President elect not being present, Vice President Gordon then took the chair, and James T. Shinn assumed the Secretaryship.

On motion of John Meakim, of New York, the following resolution was adopted.

Resolved, That invitations to attend the sittings of the Association be tendered to the following gentlemen :

Dr. Edward Delafield, President of the College of Physicians and Surgeons.

Dr. John W. Draper, President of the Medical Faculty of the University of New York.

Dr. John Watson, President of the Academy of Medicine.

The Professors and ex-Professors of the College of Pharmacy of the City of New York.

The Fellows of the Academy of Medicine.

The Members of the Pathological Society.

The Members of the N. Y. County Medical Society.

On motion of Thomas S. Wiegand, it was unanimously

Resolved, That the thanks of this Association be voted to the retiring President and other active officers, for the able manner in which they have discharged their duties during the past year.

The report of the Treasurer being called up, was read, showing a balance of \$80.89 in favor of the Association. On motion it was accepted, and referred to an auditing committee of three : Thomas Restieaux, Charles A. Junghanns and Dr. E. R. Squibb, were appointed by the Chair to that duty.

Edward Parrish, Chairman of the Committee on the Progress of Pharmacy, read that portion of the Report relating to Pharmaceutical Education and Literature, to the condition of the drug market, the revision of the Pharmacopœia and the Necrological notices, omitting the condensed records of discoveries of materia medica, pharmacy, organic chemistry, inorganic chemistry, and toxicology; the whole document occupying eighty pages of manuscript.

On motion of S. M. Colcord, of Boston, the report was accepted, and referred to the Executive Committee with discretionary power.

On motion of John M. Maisch, the following resolution was passed:

Resolved, That the American Pharmaceutical Association acknowledge their obligation to Messrs. Schaeffer and Koradi, of Philadelphia, for gratuitously forwarding their exchanges with Germany and Liverpool for several years past.

William Procter, Jr., offered the following:

Resolved, That a committee of five be appointed to propose a list of questions for investigation, the ensuing year, and report at a future sitting.

The resolution was adopted, and the following members appointed as the committee; William Procter, Jr., Thomas S. Wiegand, Dr. E. R. Squibb, Charles A. Tufts and Frederick L. John.

Dr. Squibb requesting to be released, Thomas T. Green was appointed in his place.

On motion of George W. Weyman it was

Resolved, That a committee of five be appointed to examine the chemicals, drugs and other articles offered on exhibition to the Association, and report at a future sitting of this Convention.

Charles T. Carney, George W. Weyman, S. M. Colcord, John Canavan and John Meakim were appointed by the Chair.

In accordance with a resolution adopted last year to commence the reading of scientific papers early in the sessions, the queries committed for investigation last year were called up in regular order.

Query No. 1. Relative to "Indigenous Vesicating Agents," was not replied to.

Query No. 2. Relative to Citric Acid, was answered by Charles T. Carney, to whom it had been referred.

Query No. 3. Relative of Aconitia, received no answer; Prof. Graham to whom it was referred, having retired from Pharmaceutical pursuits.

Query No. 4. On the subject of the Production of Alcohol, was answered at a later hour of this sitting by F. Stearns, who had not arrived at this time.

Query No. 5. On the subject of the Varieties of Garlic being called up, Prof. Procter informed the meeting that Dr. Thomas had engaged in the preparation of a paper in answer to the query, but that it had not come to hand. It was resolved that Dr. Thomas's paper on Garlic, when received, be referred to the Executive Committee for publication in the Proceedings.

Query 6. On Aloin, referred to Edward Parrish, was ready, but not present, and was referred to a future sitting.

Query 7. On Sulphate of Ammonia, was read by Charles Bullock.

Query 8. Relative to Chammomile Flowers, was not answered.

Query 9. On Arnica Flowers, received no reply.

Query 10. On Assafetida Plaster, was read by William Procter, Jr., and referred for publication.

Query 11. On Atropia, from American Belladonna, was read by the same gentleman, and referred.

Query 12. Mr. Carney informed the Association that Mr. Melvin had not replied to this query from his inability to procure the Japanese wax.

Query 13. On the Employment of Paraffin in Pharmacy, was answered by Charles T. Carney.

Query 14. On the Carrageen production of New England, was answered by a paper from Mr. Melzar, which was referred.

Query 15. Relative to Conium Seeds, was answered by Henry F. Fish.

Query 16. On Saffron, and query 17 on Cubebs, and query 18 on Digitalin, were not answered when called for.

Frederick Stearns being now present, was invited to read his paper, No. 4 of the list, on the production of Alcohol; it was accepted and referred for publication.

Edward Parrish suggested that the reading of these papers should be interspersed with discussion, if the subjects offered occasion for remark, and believed that the subject just read would afford a ground upon which many could speak. He stated that a kind of Alcohol made in Philadelphia, under the name of "Sweet Spirit," was not mentioned in the report. It was not generally kept, and in fact, the liquor dealers prefer its not being known, as it is employed almost exclusively for making brandies and other liquors. [A general discussion now ensued,

in which Messrs. Carney, Parrish, Squibb, Gordon, Coleord, Stearns and Guthrie, took part, and which possessed considerable interest; but our space is too small, and the reader is referred to the official Proceedings of the Association.—Ed.]

On motion of Dr. Guthrie, the Committee "appointed to propose amendments to the Drug Law" in 1858, at the Washington meeting, and which did not report last year, were continued.

Mr. Procter presented to the Association, on behalf of Messrs. Bailliere Brothers, New York, a number of copies of their new weekly Medical Journal, and their catalogue of scientific works, which were accepted.

When, on motion, adjourned to half-past three o'clock this afternoon.

Afternoon Session.

The meeting was called to order by the 1st Vice President, W. J. M. Gordon.

At the suggestion of the Business Committee, the resolution adopted last year in relation to the constitutional provision as to eligibility to membership, and the creation of a third class of associate members, was called up. The subject was discussed by Edward Parrish and Dr. Squibb, and the following was offered:

Resolved, That a committee of five be appointed to mature the proposition to have a third order of members, for the consideration of the Association, to report at a future sitting.

On a vote being taken, the motion was lost.

John D. Dix, after making some remarks on the 23d query, relative to extract of liquorice, which had been referred to him, indicating his inability to procure the requisite information to answer the query satisfactorily, as well as time to make the research, stated in regard to the subject of the adulteration of saffron presented in query 16, called up this morning, that he had not prepared a written answer, but had brought with him several specimens illustrating the subject. These were, first, the true saffron worth \$22 per pound; second true saffron deprived of its

soluble matter to a considerable extent ; third, marigold flowers mixed with a portion of true saffron ; and fourth, marigold alone, flavored with tincture of saffron. The third variety was that largely sold in the market at the rate of six or seven dollars a pound ; and the fourth variety also sold at \$2 to \$5 per pound.

The resolution of Mr. Fish, held over from last year, in relation to holding our annual sessions in New York, Philadelphia, Boston, Baltimore and Washington successively, and to the appointment of a permanent Secretary at Washington, was brought forward by the Business Committee, but on a vote being taken was lost.

The Business Committee then offered the following :

Resolved, That a suitable member be appointed by the Chair to prepare a full copious index of the entire Proceedings of the Association, including the volume of the present session, for publication in the tenth volume.

Resolved, That a full set of the Proceedings be placed at the disposal of such member, to be retained by him after the labor shall have been performed.

The resolutions were adopted, and Thomas S. Wiegand, of Philadelphia, was appointed by the Chair.

The Chairman of the Executive Committee offered the following names as candidates for membership, viz :

Robert Thompson, Bloomington, Illinois.

Warren B. Gardiner, New York City.

George M. Wheeler, Detroit, Mich.

Gustavus Ramsperger, New York City.

On a ballot being held, they were all elected.

The Business Committee now called up for consideration the resolution of Alfred B. Taylor of last year, deprecating the offering of entertainments to the Association.

The subject was discussed by Messrs. Maisch, Stratton, Stearns, Wiegand, and others, and on a vote being taken, the resolution was lost.

Franklin K. Phillips and William T. S. Cardy having retired from business, sent in their resignations, which were accepted by the Association.

The following resolution was offered by Frederick Stearns, of Detroit.

Resolved, That as the certificate of membership of this Association is

not considered appropriate in point of artistic execution, a committee be appointed by the Chair to invite designs from artists for the purpose, said committee being authorized to draw upon the Treasurer for a sum not exceeding dollars for the expense, and report next year.

After some discussion, on motion of S. M. Colcord, the resolution was laid over until next year.

The reading of scientific papers being in order, Query No. 6, on Aloin, was answered by Edward Parrish.

Query 19. This query, relative to the culture of *Elatarium*, was not answered by Mr. Tilden, owing to his inability to get the seed in time for the proper season of growth.

Query 20. Relative to *Ergotized Maize*, was not answered by Prof. Thurber.

Query 21. Relative to a test for *Extractum Cannabis*, was not answered by Edward Parrish.

Query 22. On *Gillenia*, offered for general acceptance, was not replied to.

Query 23. As has been previously stated, was not answered for reasons given.

Query 24. On the balsamic nature of *Guaiac*, was answered by William Procter, Jr.

Query 25. On the changes which spontaneously occur in the official *Ethereal Oil*, was answered in a detailed paper, illustrated with various specimens of the heavy oil of wine, by Dr. Edward R. Squibb, of New York.

Query 26. Relative to the Salts of *Morphia*, was not answered by Dr. Squibb, owing to unavoidable circumstances, and was continued for next year.

Query 28. On *Krameria*, was not answered by Prof. Thurber.

Queries 29, 30, 31. Answers were stated to be ready, but the papers were not present, and were postponed till to-morrow.

Query 32. Was not answered by Mr. Cushman.

Query 33. Was not replied to by Dr. Battey.

Dr. E. R. Squibb extended a courteous invitation to the members to visit his laboratory at 149 Furman street, Brooklyn.

Edward Parrish moved that the subject of the next place of meeting be taken up at 11 o'clock to-morrow, which was adopted.

On motion, adjourned to 9½ o'clock to-morrow morning.

Third Day—Morning Session, Sept. 13th.

The Association was called to order by the President, Henry T. Kiersted, who on taking the Chair made the following brief address :

Gentlemen,—In calling the meeting to order this morning, I beg leave to render my sincere acknowledgments for the very unexpected honor which the Association have done me, by electing me to preside over their deliberations.

I say "unexpected," because I was under the impression that some one of my more worthy brethren would have been selected for that station. At the same time, I am free to confess a deep sense of gratification at being thus complimented by this body.

Gentlemen—At a time when sectional strife and jealousy has sown the seed of discord in almost every wide-spread organization ; when not only political, but even religious questions have been embittered by mutual distrust and suspicion—it has been eminently gratifying in such times to witness the dignified indifference with which this scientific body has "pursued the even tenor of its way." No clamor of demagogues has found an echo here. No factious whisper has ever disturbed your harmony. With true patriotism and philanthropy you have met year after year, from North and South, from East and West, to discuss, like brothers, questions involving the common good of all. And those of you, who like myself have turned with feelings of melancholy from the spectacle of warring sections, will appreciate the pride with which I respond to your flattering tribute.

May future years confirm the precedent you have so well established ; and demonstrate that, where men's hearts are right, there may always be found some common ground on which patriots from every section may stand together without a sacrifice of right or dignity.

Report was made that Charles Shivers, one of the delegates from the Philadelphia College of Pharmacy, was now present. The minutes of the last session were read, amended and adopted.

The Executive Committee proposed the following names as candidates for membership :

Victor Heydenreich, Brooklyn, New York.

Augustus Presinger, New York city, New York.

George Blinkhorn, Rock Island, Illinois.

Thomas R. Coombe, Philadelphia, Pennsylvania.

A ballot was ordered, and Messrs. Cushman and Coddington acting as tellers reported their election.

Evan T. Ellis to whom was referred query No. 31, relative to commercial varieties of arrow root, read a paper in answer there-

to, and exhibited various samples of arrow root. Not having had the opportunity to investigate the subject fully, on motion, it was continued to him for another year.

A letter was read from Prof. R. Ogden Doremus, dean of the faculty of the New York Medical College, dated August 22d, tendering the use of their buildings for the meetings of the Association.

On motion of S. M. Colcord, the communication was accepted, and the thanks of the Association tendered to the New York Medical College for their courteous offer.

The reading of the scientific papers being in order,

Query No. 36. On the products of the distillation of bituminous coal and allied substances. A letter was read from W. H. Whitmore, to whom it was referred, stating that he had printed his paper, and forwarded copies to the Association. As only the introductory portion of the "pamphlet" was written by Mr. Whitmore, (the rest being papers on the subject by other parties, already published,) on motion it was resolved, that only that portion of the report addressed to the Association should be read, and after considerable discussion this was accepted and directed to be placed on file.

The time fixed yesterday for discussing the subject of the next place of meeting having arrived, a motion was made by William J. M. Gordon that the next annual meeting be held in Cincinnati.

A letter from the St. Louis Pharmaceutical Association, signed by its officers, was read, inviting the Association to hold its next meeting in St. Louis.

After considerable expression of sentiment, the motion of Mr. Gordon was amended by the substitution of the words "St Louis" for "Cincinnati," and was finally carried unanimously in the following resolution.

Resolved, That the next annual meeting of the American Pharmaceutical Association, shall be held in the city of St. Louis, at 3 o'clock, on the fourth Wednesday in August, 1861.

Frederick Stearns offered the following.

Resolved, That a committee of nine members be appointed to correspond with the leading pharmacutists of the western cities, inviting their attendance at the next annual meeting in St. Louis, and if possible to organize excursion parties to start from the Atlantic cities for the same purpose.

Which was adopted.

On motion, it was resolved that when we adjourn, we adjourn to meet this afternoon at half-past three o'clock.

The reading of scientific papers was again resumed.

Query 37. On the essential oil of Sassafras, not having been answered, was continued to A. P. Sharp for another year.

Query 38. On Pink Root and Senega, was continued to L. F. Dohme for another year.

Query 39. On the American species of Cantharis. A letter was read from S. Chapman Hill, to whom this query was referred, giving satisfactory reasons for not having replied to it, and asking for its continuance to him for next year, which was granted.

Queries 40 and 41 received no reply, and were passed by.

Query 43. Dr. Squibb to whom this query was referred, made a verbal reply, based on his experience, but had not been able to produce a figure of apparatus that he felt satisfied to offer to the Association.

Query 44. In regard to the best form of pharmaceutical still for the apothecary, &c., was continued to Dr. Squibb for another year.

Query 29. On Lupuline and Hops, was now read by Charles A. Tufts, and referred for publication.

The Executive Committee now reported the following names as candidates for membership, viz.:

Giles D. Simms, of Washington, D. C.

George Buck, of Chicago, Illinois.

Abram Alberger, Jr., Philadelphia, Pa.

George W. Mowbray, New York city, New York.

A ballot was ordered, and the gentlemen were all declared to be elected.

Query 27. On the depreciation of Smyrna Opium, was answered by P. Wendover Bedford. Interesting comments were made on this subject by Dr. Squibb, Edward Parrish, and others.

Query 42. On Theobroma Cacao, was answered in a lengthy paper by Dr. Donnelly, describing the history, botany, culture and manufactured products of Cacao, a portion of which he read.

On motion, the paper was accepted by the Association, and referred to the Executive Committee.

The following additional members signed the register, either

during this or the subsequent sittings, and are all presented together, for convenience:—

Lester S. Hubbard, Brooklyn, N. Y.	William Ball, New York City.
C. Shivers, Phila., Pa.	George M. Mowbray, “
G. W. De la Vergne, N. York City.	Augustine Presinger, “
Frederick Stearns, Detroit, Mich.	Geo. W. Southwick, “
E. Donnelly, Phila., Pa.	Richard Forester, Brooklyn, N. Y.
Matthew F. Ash, Jackson, Miss.	Peter D. Leys, “ “
Charles A. Heinitsch, Lancaster, Pa.	George C. Leys, “ “
Evan T. Ellis, Phila. Pa.	Wm. H. Page, “ “
Wm. M. Somerville, N. York City.	Otto Lais, Jr., New York City.
F. V. Heydenreich, Brooklyn, N. Y.	Th. Schumann, “
Henry Q. Mack, New York City.	Gustavus Ramsperger, “
J. Lindley Pyle, Brooklyn, N. Y.	

On motion, adjourned.

Thursday Afternoon Session—Sept. 13th.

The meeting was called to order by President Kiersted.

Query 34. On the best method of keeping camphor in the form of powder, was answered by a paper from Henry D. Fish, who presented a sample of the powdered camphor.

The President announced the following gentlemen as constituting the Committee of nine, called for by the resolution of Frederick Stearns, in relation to obtaining a larger attendance at our next annual meeting:—

S. M. Colcord, Boston,	F. Stearns, Detroit,
Edward Parrish, Philadelphia,	Wm. J. M. Gordon, Cincinnati,
E. O. Gale, Chicago,	John Thomson, Sumter, S. C.,
Geo. W. Weyman, Pittsburgh,	W. H. Peabody, Buffalo, N. Y.
John Meakim, New York,	

Query 35. On the Guarana of Brazil. Henry F. Fish reported that he had not been able to obtain guarana in time and in sufficient quantity to prepare his essay, and asked to read an essay on “Coca” instead, as an analogous subject. This being approved, he read the paper, which was referred to the Executive Committee.

Volunteer papers were now called up by the Business Committee.

Dr. Wilson H. Pile, of Philadelphia, read a paper on the Dicas Liverpool hydrometer, an instrument for ascertaining the proof of alcohol, and exhibited one of the instruments to the meeting. The paper was referred to the Executive Committee.

John Faber, of New York, read an interesting paper on "Manufacturing Pharmacy," as it might be developed in the apothecary's store. The views given in the essay were advocated by Dr. Squibb and Edward Parrish. Dr. Squibb also remarked on the tendency that selling manufacturers' galenical preparations had to reduce the profession of pharmacy to mere shopkeeping trade. Mr. Stearns also advocated these views.

The Committee appointed to audit the Treasurer's account, reported that they had discharged their duty, and find that the balance of cash to be passed to debit of Treasurer's account, for the current year, amounts to eighty-one dollars and thirty-nine cents.

Edward Parrish presented a living specimen of the Benne plant, from the garden of F. Brown, at Burlington, N. J., illustrative of a paper on the culture of Benne as an agricultural product for its seed and oil. He also exhibited and explained a new gas furnace, peculiarly adapted to evaporation, and, by an additional contrivance, to processes requiring high temperature.

It was moved and carried, that when we adjourn it shall be till to-morrow morning at 9½ o'clock.

The Executive Committee having recommended the name of Wm. H. Page, of Brooklyn, N. Y., as a candidate for membership, a ballot was ordered, and his election was reported by the tellers.

William Procter, Jr., Chairman of the Committee on Subjects for Investigation the ensuing year, reported a list of queries, with the names of gentlemen accepting them, which was read, and the report left open for further additions, when the Committee should report finally. (See page 514.)

On motion, the subject continued last year to Henry A. Tilden, on the comparative value of foreign and indigenous narcotic plants, was, in compliance with the request of that gentleman in a letter to the Association, continued to him another year.

Frederick Stearns offered the following:

Resolved, That this Association will not accept any report or scientific paper, written by a member or contributed by one not a member, which has been previously printed and distributed.

Which was adopted.

The Business Committee reported the possession of a paper received from John L. Kidwell, of Georgetown, D. C., being a "List of medicinal and useful Plants procured by the Agricultural division of the Patent Office."

On motion, the paper was read, accepted and referred to the Executive Committee.

John M. Maisch then read a paper on Narcotic Fluid Extracts, which, on motion, was accepted, and referred to the Executive Committee. The paper was accompanied by specimens of the fluid extracts of Belladonna and Hyoscyamus by the process it recommended.

The same gentleman read a paper on Hydrobromic Acid, which was accepted, and referred as usual.

On motion of Dr. Squibb, the following "Committee on Home Adulterations" was appointed by the chair, viz.: Charles T. Carney, of Boston, Chairman; John D. Dix, of New York; Joseph Laidley, of Richmond; William Procter, Jr., of Philadelphia; Charles A. Junghanns, of Cincinnati, and George W. Andrews, of Baltimore.

After some discussion on the propriety of offering prizes for papers to be read next year, on motion, adjourned to 9½ o'clock to-morrow morning.

Fourth Day—Morning Session—September 14th.

The meeting was called to order by President H. T. Kiersted. The minutes of last session were read, corrected and adopted.

The Executive Committee offered the names of the following gentlemen as candidates for membership:—

Alexander Blake, of New York city.

J. Weaver,

"

A ballot was ordered; John Meakim and Evan T. Ellis, acting as tellers, reported their election.

Dr. Squibb, of the Business Committee, called for the reading of the biographical paper on Sir Henry Cavendish, which was proceeded with by the author, Henry F. Fish. It spoke of the parentage and education of the distinguished chemist and discoverer, and gave anecdotes of his eccentricities, etc.

On motion, the paper was accepted by the Association and referred to the Executive Committee.

Charles T. Carney, chairman of the Committee appointed to examine the articles on exhibition, read the following report, which was adopted :—

The Committee appointed to report upon the Exhibition of Specimens, submit the following remarks :

Of course, owing to the limited time at their disposal, they can speak only in general terms, except in those cases where special information upon any specimens has been given them by the exhibitors:—

CHEMICALS.

We notice a collection of twenty-four bottles of very fine looking chemicals from Messrs. Chas. Pfizer & Co., of New York; prominent among them are the specimens of Strychnia and its salts, Pyro-Phosphate of Iron, Hypo-Phosphite of Lime, Ammonio-Citrate of Iron, Citrate of Iron and Quinia, Red-Precipitate and re-sublimed Iodine.

A collection of seven bottles of chemicals, made by Messrs. Garnier, Lamoureux & Co., of Paris, exhibited by F. A. Reichard, of New York, are worthy attention for their fine appearance and apparent excellence; among them are Citrate of Iron, Tartrate of Potassa and Iron, Iron by Hydrogen and Soluble Cream-Tartar.

Geo. W. Weyman, of Pittsburg, Pa., has on exhibition several specimens of "Crude Mineral Oils," from the great oil-bearing district of Western Pennsylvania, which are quite interesting,—presenting as they do such a variety of physical characteristics, though taken from localities almost identical.

Specimens of Chloride of Propylamine and Valerianate of Ammonia, in fine crystals, exhibited by Messrs. Benj. J. Crew & Co., of Philadelphia, are, in the opinion of your Committee, the best they have ever seen.

Eight specimens of chemicals are exhibited by Messrs. W. J. M. Gordon & Bro., Cincinnati; among them we notice specially Chromic Acid in crystals, Iodide of Lead, Hydrastin, Naphthalin and Sulphate of Sanguinaria as being very excellent.

Eleven specimens of chemicals exhibited by Edward Parrish, Philadelphia; among them some of the more rare compounds—such as Tannate of Bismuth, Neutral Benzoate of Ammonia, Benzoate of Soda, Terbenzoate of Iron, Nitro-Prusside of Sodium and Aloin are noticed as worthy the attention of members present.

Some very fine specimens of pure inodorous Glycerine, made by Henry C. Bower, Philadelphia, on exhibition by Charles Bullock, of Philadelphia, attract our attention. We find the sp. grav. to be 1.225, and testing it in the imperfect manner at our command, judge it to be a very superior article,—quite equal to any foreign we have seen—and we regard it with gratification, as being an advance in home manufactures.

A specimen of Sulphate of Ammonia, from Gas Liquor, is also exhibited by the same parties.

Henry F. Fish, of Waterbury, Conn., exhibits a fine specimen of "Pulverulent Camphor," prepared by the process peculiar to himself (see volunteer paper in sequel); also a specimen of "Sassy Bark," from the coast of Africa; also specimens of embossed pill-box covers,—the embossing being done by a hand-press.

PHARMACEUTICAL PREPARATIONS.

Edward Parrish, of Philadelphia, Pa., exhibits some forty specimens of various pharmaceutical preparations,—not in general use, but evidently prepared with careful attention; among them Pierlot's Elixir of Valerianate of Ammonia, Glycerole of Hypophosphites, Bitter Wine of Iron; and also Aloin, and Bi-Muriate of Morphia, imported by him from P. Squire, of London, England.

A case of quite a number of pharmaceutical preparations, exhibited by John Faber, Pharmacist, of New York, attracts our attention. Many preparations not often made by the retailer, apparently of very reliable quality, show a commendable interest in this branch of our profession. The specimens of fluid extracts, made by formulæ of Prof. Procter, and the powdered vegetable extracts, as recommended by the Prussian Pharmacopœia, attracted our special attention.

We cannot too earnestly urge upon the retail Pharmacutists throughout the country the real practical and valuable addition to our stock of knowledge which follows the adoption of this plan of personal manufacturing of pharmaceutical preparations.

Charles Shivers, of Philadelphia, has on exhibition some specimens of spread plasters in cases; among them we notice the Isinglass Plaster as being a very fine article. He also has specimens of Water-Proof Arnica and Court Plasters.

A case of neatly spread Strengthening, Warming and other Plasters is exhibited by Geo. J. Scattergood, of Philadelphia.

Specimens of Grape and Blackberry Wine are exhibited by F. A. Rockwell, of Ridgefield, Conn.

An assortment of forty specimens of Dragees and Granules, made by Garnier, Lamoureux & Co., of Paris, France, is exhibited by F. A. Reichard, of New York, and presents a handsome and finished appearance.

Alex. Cushman, of New York, exhibits specimens of "Wine of Quinum," and the compound Syrups of the Phosphates and Hypophosphites, and Syrupus Ferri Super-Phosphatis.

C. B. Robbins, of Worcester, Mass., exhibits specimens of Gutta Percha Adhesive Plaster, and "Good Samaritan" Plaster; both articles appear to be of excellent quality.

Messrs. Gale Brothers, of Chicago, exhibit a fine article of Native Wine, made from the wild grape, the flavor of which is very evident.

DRUGGISTS' SUNDRIES AND APPARATUS.

Quite an extensive assortment of druggists' sundries is exhibited by

Messrs. Morgan Brothers, of London, England, through Messrs. Schieffelin Brothers & Co., of New York. We notice several novelties among the collection. The assortment of Liquids for Dyeing is somewhat new. Specimens of Oil Bottles, Pungents, Lint, and Turned Boxes, are also to be found in the collection.

H. H. Burrington, of Providence, R. I., exhibits a specimen of a new Uterine Elevator.

A large assortment of Hydrometers, Urinometers, and Specific Gravity Instruments, exhibited by the maker, Dr. W. H. Pile, of Philadelphia, merits the attention of the Association. They have been found to be every way worthy of confidence after long and careful trials.

Walter P. Denslon, of New York, and Edward Parrish, of Philadelphia, both exhibit specimens of Gas Stoves, which would be found useful in every pharmacist's laboratory.

Messrs. B. B. & J. Hagerty, of New York, present several specimens of Glass Ware, Glass Syringes, Breast Glasses, &c. We notice specially the specimen of Glass labelled shop-bottles, with a label, indestructible, as far as the action of alcohol, acids and such liquids is concerned; also a glass-capped Oil-Bottle and Graduated Glass. They have on exhibition a new stand for Soda-Water Tumblers.

CHARLES T. CARNEY,	} Committee.
GEO. W. WEYMAN,	
J. CANAVAN,	
S. M. COLCORD,	
JOHN MEAKIM,	

Dr. Squibb, from the Business Committee, offered the following preamble and resolution:—

WHEREAS, The subject of legal restraint for curtailing the sale of poisons is at present much agitated in some States of the Union, and appears to be attracting universal attention: *And Whereas*, this Association has always regarded this important subject as one of the reformations most desirable between pharmacutists and the public: *And Whereas*, Several bills have been enacted and proposed for the purpose of effecting the desired object, neither of which entirely meets the approval of this body; therefore,

Resolved, That the judgment of this Association be now had upon the subject, and that thereon a committee of three be appointed to mature a plan by which the objects may appear to be best attainable,—that committee to report at the next session of the Association.

Dr. C. B. Guthrie made an eloquent address on the subject of the resolution, alluding to the difficulty of deciding who were responsible physicians, to the odium unjustly resting upon the

apothecary, when cases of poisoning occur, and the necessity of deciding who are and who are not the genuine apothecaries.

Isaac Coddington said that the law restricting the sale of small quantities of poison, by rendering the purchase of larger quantities easier, would prove more dangerous by causing persons to buy the larger amount overlooked by the law, and lay aside the unused portion where it might be mistaken for culinary articles.

Dr. Squibb deprecated the enumerating of poisons, in the laws restraining the sale thereof, which are not used for murderous purposes, such as cyanide of potassium, cannabis indica, cantharides, essential oils, &c. He also referred to the absence of laws protecting the public from incapable practitioners of medicine and pharmacy, and of those protecting such as are capable. The framers of the laws in attempting to cover too much ground have failed to cover the chief point of difficulty.

Dr. Percy, of New York, was introduced to the Association by Dr. Squibb, and was, on motion, invited to address the convention. He spoke of having aided in drawing up the original bill submitted to the New York Legislature, which was quite different from that now the law, only two sections of the former having been passed, yet he considered so far as requiring a registration of sales it would prove useful. The original bill required that every person who sold poisons should be licensed to do so,—the fee to be fixed upon at a nominal price. This would make every authorized seller of poisons known to the officers of the law, and thus facilitate the detection of the guilty. The object of the law was not for preventing suicide, but to detect the murderer and abortionist; and, in so far as it did this, it would prove useful.

Edward Parrish expressed himself as favorable to such regulating laws, but too many substances have been restricted. He referred to the decision of the Pharmaceutical Society, that the only safeguard was in the character of pharmacutists and those selling poisonous substances. Apothecaries, in his opinion, saved thousands of lives by their vigilance, and were often blamed undeservedly.

Dr. Guthrie remarked, that if you start with protection to the apothecary, you make it an incentive to young men to properly

qualify themselves and take a regular collegiate course, and not be levelled with grocers and dry goods dealers, as mere traders; and that such protective laws are the kind wanted.

Dr. Gardiner, of New York, being introduced, thought it injurious to have laws which cannot be carried out; the New York law he considered to be in that category; that conscientious men in the business were the best safeguard. Any man may set up for a doctor and obtain articles for criminal purposes, and the present registry law can be easily evaded and is futile. He also recommended the idea that physicians should be careful to send their prescriptions to qualified apothecaries.

Charles A. Junghanns, of Cincinnati, was in favor of the Association making the best draft of a law for the purpose that can be effected as a primary step.

W. J. M. Gordon stated that the Ohio law required arsenic to be colored before being sold.

Dr. Bachelder, of New York, thought that the present New York law was somewhat beneficial, but was easily evaded.

John Meakim believed the difficulty laid at our own doors; we were too unwilling to act vigorously in the matter.

Charles T. Carney believed the law should restrict the sale of very few poisons, and that *some* State law would be acceptable to most pharmacutists. He had entirely declined the sale of some leading poisons in his own store.

Frederick Stearns considered that no law could be framed of any practical results, and that in such laws, if passed, poisons should not be specified, but generalized.

W. J. M. Gordon was opposed to the views of F. Stearns in regard to generalizing the expression of the law, which he believed should specify the most usual poisons.

W. Procter, Jr., remarked that the laws usually passed to regulate the sale of poisons were more for the protection of the public than for the relief of the apothecary; that the Pennsylvania law does not limit the sale of poisons, but compels the registration of five kinds, viz: arsenic, strychnine, morphia, corrosive sublimate and prussic acid when sold by retail; that this law could and should be carried out by regular apothecaries, and would thus far prove useful in tracing purchases with evil design.

Dr. Percy agreed with Prof. Procter, that the use of the law was chiefly in affording the means to discover who had bought and sold poisons, and thus aid the cause of justice.

The question on the preamble and resolution of Dr. Squibb being called for, a vote was taken, and they were adopted.

Edward Parrish offered the following:

Resolved, That the Executive Committee be directed to forward copies of the Proceedings, including those of previous years as far as practicable, to the various pharmaceutical and chemical societies and colleges in this country and Europe, with the request for exchanges.

It was moved to amend the resolution by including the editors of the leading newspapers, which on being put to vote was lost.

The resolution was then voted for, and was adopted.

William J. M. Gordon, of Cincinnati, offered the following:

Resolved, That this Association tender their heartfelt thanks to the New York College of Pharmacy, and to the druggists and pharmacutists of New York, who have contributed to the comfort and entertainment of its members during the present sessions.

Which was unanimously adopted.

Dr. Squibb on behalf of the Business Committee having informed the Association of the remaining business claiming attention, considerable discussion ensued on the propriety of now entering upon the subject of weights and measures; which, on motion, was taken up.

The following preamble and resolution offered by the Business Committee were read, viz;

WHEREAS, It is the judgment of this Association that a change in the official tables of weights and measures is desirable and expedient; *And whereas*, it is understood that the final Committee of Revision and Publication of the U. S. Pharmacopœia, have as yet come to no action upon this subject; therefore,

1. *Resolved*, That it is expedient and proper for this Association, at this time, to offer its judgment upon this important subject.

2. *Resolved*, That the change of weights recently adopted in the Committee of the Council for consolidation and revision of the British Pharmacopœia, by which change the table of avoirdupois weight is adopted, with a new division of the avoirdupois ounce into 480 parts, to be called grains, meets the approval of this Association, and is recommended for adoption in the National Pharmacopœia.

The vote being taken on the preamble it was adopted.

The first resolution was also adopted.

The second resolution was read again, and its tendencies explained by Dr. Squibb, and views were expressed by various members on the subject. After a great deal of discussion, in which the majority were opposed to the resolution, the motion to adjourn till 3½ o'clock prevailed.

Afternoon Session.

The meeting was called to order by the President.

The Chairman of the Committee on Questions for Investigation, &c., read the conclusion of the report, which was now on motion adopted in full, and is as follows :

The Committee appointed to prepare a list of subjects for investigation next year, report the following, viz :—

1. Is morphia volatilizable by heat without losing its narcotic properties? If not, how are the narcotic effects of opium smoking accounted for?

Accepted by William Procter, Jr., of Philadelphia.

2. Cerate made with Japanese wax is said to acquire a dark color. Is this change a necessary consequence of the use of that wax? and what is the real value of that substance in Pharmacy?

Accepted by Thomas A. Lancaster, of Philadelphia.

3. To what extent can oil of benne (ol. sesami) be substituted for olive oil in Pharmacy?

Accepted by James T. Shinn, of Philadelphia.

4. What are the probabilities in favor of tartaric acid and tartar becoming commercial products of the wine culture of the Ohio valley?

Accepted by W. J. M. Gordon, of Cincinnati.

5. Can the root of *Aconitum napellus* be economically produced in the United States, and does it possess the activity of the imported drug derived from that plant?

Referred to Henry A. Tilden, of New Lebanon, N. Y.

6. Arsenical pigments;—are they as extensively employed, and with such poisonous effects as has been asserted?

Accepted by Benjamin J. Crew, of Philadelphia.

7. Is there a permanent solvent for cantharidin that will retain it in a liquid state in pharmaceutical preparations?

Accepted by Wm. R. Warner, of Philadelphia.

8. Garancin. What is the best process for obtaining it, and the best method of testing its purity as found in commerce?

Accepted by Benjamin J. Crew, of Philadelphia.

9. Is there a principle in *Chenopodium anthelminticum* analogous to *santonin*?

Accepted by James Balmer, of Baltimore.

10. Is there a crystalline active principle in *capsicum*? or does it owe its activity to a soft resin?

Accepted by Frederick L. John, of Philadelphia.

11. What are the advantages, if any, of *Conium* seeds for making the *Tinctura Conii*, as regards uniformity of medicinal strength, and increased power, compared with the leaves?

Accepted by Henry F. Fish, of Waterbury, Conn.

12. Has the resinoid principle of *colocynth*, extracted by alcohol, a reliable and constant therapeutic power? and may it advantageously be employed in medicine?

Accepted by John Faber, New York City.

13. The oil wells of Western Pennsylvania—the quantity and quality of oil they afford at present, their prospective value, and the geological character of the formation where the oil is deposited?

Accepted by George W. Weyman, of Pittsburg.

14. Does wood creasote exist in the market? To what extent compared with coal tar creasote or carbolic acid? And what are the objections, if any, to the substitution of the former by the latter substance in medicine?

Accepted by Charles Bullock, of Philadelphia.

15. Cotton seed oil, the expressed oil obtained from the seeds of *Gossypium herbaceum*, being easily obtained, and at a low rate:—Are there any therapeutic objections to its being substituted for olive oil, in pharmaceutical preparations?

Accepted by William J. Watson, of New York City.

16. Is propylamin the principle in *Ergot* that influences uterine contraction; and if so has the propylamin of commerce, derived from her-ring pickle, a like power?

Accepted by E. Donnelly, M. D., of Philadelphia.

17. Is there a test for the therapeutic value of extract of *Cannabis Indica*, based on the chemical behaviour of its resin, that may be relied upon to distinguish the active from the inert drug?

Accepted by William Procter, Jr., of Philada.

18. It has been alleged that commercial honey is sometimes largely adulterated with artificial grape-sugar syrup, and ordinary syrup. Is this true—where, and to what extent, is it carried on, and how may the adulteration be detected?

Accepted by Frederick L. John, of Philad.

19. What is the most eligible manner of dispensing Phosphorus, for internal use?

Accepted by John Faber, of New York City.

20. Is the sedative action of *Veratrum viride* due to the veratria known to exist in it, or is there another principle contained in it to which that power is due?

Accepted by George J. Scattergood, of Philad.

21. Copaiba. What are the botanical sources of this drug as at present furnished to commerce? and what is its present commercial history?

Referred to Prof. Joseph Carson, of Philadelphia.

22. What is the actual condition of the codliver oil production and trade, in the United States?

Accepted by E. M. Blatchford, Rockport, Mass.

23. Is the present wholesale production of sugar-coated pills advantageous to the interests of medicine? If not, what are the objections to it? what are the best processes for coating pills with sugar, gelatin, and other substances, for extemporaneous use, by the dispenser of prescriptions?

Accepted by Frederick Stearns, of Detroit, Mich.

24. Does the root of *Convolvulus panduratus* contain a glucocidic resin analogous to jalapin, and has it cathartic properties?

Accepted by J. L. Lemberger, of Lebanon, Pa.

24. What is the value of *Chelidonium majus* as a source for sanguinaria, compared with *Sanguinaria canadensis*?

Accepted by P. Wendover Bedford, of New York City.

26. What is the tannin value of the indigenous astringents of the United States, for medicinal and other purposes?

Accepted by Wm. R. Warner, of Philadelphia.

27. Can Phospho-molybdic acid, as a reagent for alkaloids, be made available as a test for the strength of the narcotic extracts?

Accepted by Ferdinand F. Mayer, of New York City.

28. What are the statistics of the trade in castor oil, as regards locality and amount of production of the beans, and the preparation of the oil?

Accepted by Ferdinand F. Mayer, of New York City.

29. To what proximate principle does the marc of castor oil beans owe its activity as a purgative?

Accepted by William R. Warner.

30. What is the true botanical source of "Southern Prickley ash bark"?

Referred to Dr. Robert P. Thomas, of Philadelphia.

31. The subject of new remedies, with reference to their effect upon the progress of pharmacy, and their educational influences upon pharmacutists.

Accepted by Edward Parrish, of Philadelphia.

32. Anilin dyes—the history of the discovery and production of these coloring agents, and their probable influence on the decorative arts.

Accepted by George W. Weyman, of Pittsburg, Pa.

33. An essay on tartaric acid, and the medicinal tartrates, in their chemical and pharmaceutical relations.

Accepted by John M. Maisch, of Philadelphia.

34. Is the tomato available as a source of citric acid for the supply of commerce, and has the seed of this fruit any medicinal power?

Accepted by Thomas A. Lancaster, of Philadelphia.

35. Are the "Spirits" of the Pharmacopœia better when made by distillation, than the preparations made by dissolving the respective volatile oils in alcohol.

Accepted by Thomas Wiegand, of Philadelphia.

36. What course should be adopted by pharmacutists in view of the present state of the liquor market, particularly as regards factitious brandies and wines?

Accepted by Henry F. Fish, of Waterbury, Conn.

37. An essay on the commerce in Quackery, in the United States, and its influence on the practice and progress of pharmacy.

Accepted by Thomas S. Wiegand, of Philadelphia.

38. The leaves of the castor oil plant (*Ricinus communis*,) and their reported property of promoting the secretion of milk.

Accepted by Alexander Cushman, of New York City.

39. What is the botanical source and commercial history of the "anacahuito wood" of Mexico, said to be used in Germany for diseases of the lungs?

Referred to Charles Caspari, of Baltimore, Md.

40. What are the sources of the senega and spigelia of present commerce?

Continued to L. H. Dohme, of Baltimore, Md.

41. Can Elaterium be produced in the United States, and if so, is the indigenous product equal in power to the English drug? (for 1861 and 1862.)

Referred to Professor Robert P. Thomas, of Philadelphia, Pa.

42. What is the smallest outfit of apparatus for a retail pharmacist with reference to the preparation of those chemical and pharmaceutical products which are economically made on a small scale?

Accepted by Edward Parrish, of Philadelphia.

44. What are the best arrangements, and precautions to be observed in the preparation of soap for pharmaceutical uses.

Accepted by Charles Shivers, of Philadelphia.

45. What is the active principle of arnica flowers; and what the best process for isolating it?

Continued to Dr. Henry T. Cummings, Portland, Maine.

46. The American species of the genus *cantharis* as regards their usefulness in medicine as vesicants, their existing quantity in view of the supply of commerce, and other information regarding them?

Continued by request to T. Chapman Hill, of Antioch, Ohio.

47. What is the best form and material for a still for the pharmacist's use of from two to four gallons capacity, appropriate for heating by gas or stove heat, which shall combine economy with efficiency and fitness?

Continued to Dr. E. R. Squibb, of Brooklyn, New York.

48. An inquiry relative to the comparative value of the several arrow roots of commerce, which are derived from the *Maranta arundinacea*, &c., the query of last year.

Continued to Evan T. Ellis, of Philadelphia.

49. European Pharmacy,—what are the chief differences and points of resemblance between it, and our own?

Continued to Robert Battey, M. D., of Rome, Georgia.

50. What are the principal sources of oil of sassafras for the supply of commerce, and what is its mode of manufacture and the quantity produced annually?

Continued to Alphæus P. Sharp, Baltimore, Md.

The Committee desire to receive authority to add to this list such of the unanswered questions of 1860, and others, as they may deem most likely to receive attention from the gentlemen to whom they may be intrusted.

WILLIAM PROCTER, JR., *Chairman,*

THOMAS S. WIEGAND,

EDWARD R. SQUIBB,

CHARLES A. TUFTS,

FREDERICK L. JOHN,

New York, Sept. 14, 1860.

Committee.

After some informal discussion on the subject of offering prizes for scientific papers, on motion it was laid over to come up with the unfinished business next year.

Query No. 30. On "Patents in their relation to Pharmacy and Medicine," by Edward Parrish, was now read, (it having been mislaid when called for in the proper order,) and was referred to the Executive Committee.

The President announced the following gentlemen as the committee of three called for by the resolution in relation to the sale of Poisons:

Samuel M. Colcord, of Boston,

William Procter, Jr., of Philadelphia,

William J. M. Gordon, of Cincinnati.

The subject of weights and measures being now called up, the second resolution was read again, the discussion continued, and on a vote being taken it was not adopted, the general expression being against it.

Dr. Squibb offered the following as a substitute for that resolution, viz:

Resolved, That in the judgment of this Association it is, expedient and practicable in the official formulas of the Pharmacopoeia to abolish the use of measures of capacity, and to substitute for absolute weights and measures the term *parts*, meaning *parts by weight*; and that this Association recommends such a change as the most simple, practicable, and effective one that can be at present made.

After considerable discussion this resolution was adopted. [It is proper to state that the number present when these resolutions were lost and passed was much smaller than the average attendance at the other sittings, and it is to be regretted that a subject of such general interest should have been left till the last sitting for its decision.—ED.]

The Business Committee brought forward the following:—
“Whereas this Association recognizes the justice and propriety of the recent movements in some localities, in regard to restricting the Sunday business of pharmacutists to certain definite hours, for very obvious good reasons, therefore

Resolved, That this Association heartily recommends the adoption of definite hours for the transaction of the necessary Sunday business; such hours to be determined by the co-operation of the public, the Medical and the Pharmaceutical interests of the various localities, when these interests may combine to adopt the recommendation.

Which was adopted.

The Business Committee reporting that there was no more business to be brought forward, it was on motion resolved that that committee be continued to bring deferred business before the Association next year.

John M. Maisch offered the following:

Resolved, That the thanks of the Association are due to the President, the first Vice-President and the Secretary, for the efficient performance of their duty.

The minutes were then read and approved, when the Association adjourned to meet in St. Louis on the fourth Wednesday of August, 1861, at three o'clock, P. M.

JAMES T. SHINN, Secretary.

INSECT POWDER.

BY JOSEPH ABEL.

A vegetable powder, under the name of Persian Insect Powder, has lately been introduced into the drug market, for the extermination of insects, vegetable parasites, etc. Until recently, the botanical source of this powder has not been known. For a number of years it was erroneously considered to be a native of Persia, but it has been traced beyond question by Dr. Koch, as having its origin in the Caucasian provinces, and to be the contused blossoms and flowers of *Pyrethrum Roseum* and *Pyrethrum Carneum*. It is of a yellowish gray color, perfectly odorless, yet slightly irritating the nostrils; at first almost tasteless, but afterwards leaving a burning sensation upon the tongue. The high price obtained for it, taken in connection with the scarcity of the article, has induced dealers to adulterate it with plants of similar characteristics, such as chamomile flowers, fleabane, etc., but the presence of these extraneous substances can without difficulty be detected by the peculiar odor, and from the fact, that in proportion as these substances are introduced, the efficacy of the powder is impaired.

From experiments lately made in Europe, it has been sufficiently demonstrated, that the plant can be propagated from the seed, and that it will thrive well in a climate similar to that of our Northern States.

I have recently been informed by a gentleman who obtained some of the seeds of this plant from the Agricultural Bureau at Washington, that the plants therefrom are in a flourishing and prosperous condition.

As its effects for the destruction of bugs, roaches, parasites on delicate plants, etc., has been fully established, and it being otherwise harmless, its introduction into general use would be of great importance to families and horticulturists, from the fact that it would exclude the use of poisonous articles, now resorted to for such purposes, which are often the cause of serious accidents.

Pittsburgh, August 31, 1860.

CHEMICAL NOTES.

BY JOHN M. MAISCH.

Chloride of Potassium.—Chemical works state that this salt crystallizes in cubes, sometimes elongated to prisms, and rarely in octohedrons. Several years ago, when evaporating a considerable quantity of a solution of this salt, it occurred to me to ascertain under what circumstances it might be made to assume these different shapes. I exposed the solution to the heat of a sand bath, taking care not to raise the temperature to the boiling point of the liquid. In this condition it separated perfect cubes. As soon as they commenced to grow together, the solution was decanted and allowed to cool slowly at a summer temperature. The chloride now crystallized in four-sided prisms which were drained on a funnel, and the clear liquid set aside over night, when the salt was found to have crystallized in irregular pyramids, composed of numerous small crystals.

Since that time I have repeated the experiment on several occasions, always with the same result. In no instance did I obtain octohedrons, which are stated to be produced from alkaline solutions. I took good care to have my liquid in all cases perfectly neutral, and to cool it very slowly upon a bed of straw or saw dust, and in a room not affected by sudden changes of the atmosphere.

The cubes are semi-transparent, sometimes nearly opaque and perfect when single, but usually deformed on one side when grown together. The prisms are four-sided, rectangular, transparent, and, as seen under a magnifier, do not consist of cubes grown together in the direction of one axis; when exposed to heat, they decrepitate below their fusing point, losing a little hygroscopic water, and break chiefly in the direction of their long axis, resulting in smaller prisms and needles but not in cubes. The pyramids are an irregular section of a cube, and are composed of a conglomeration of the rectangular prisms joined together by their prismatic planes; the end planes are cut off at an angle of about 45° , to which the planes of a layer of prisms, cut off in a similar oblique direction, are joined so as to form a right angle. The space between these two layers is filled up

with shorter prismatic crystals, attached to one another in the same manner. Among these shorter crystals I could in no case discover a really cubic crystal.

Occasionally, I have met among the last crop of crystals some which had all the appearance of two or three planes of a hollow, regular octohedron; they are very thin, striated lengthways under the magnifier, as if composed of prisms, and look like a portion of the hollow, four-sided pyramids in which chloride of sodium frequently crystallizes.

It appears to me, in accordance with the foregoing facts, we shall have to consider chloride of potassium as dimorphous in two different systems. Besides crystallizing in regular octohedrons, the solution separates, when kept near its boiling point, regular cubes, and on and after cooling, rectangular prisms.

Paramorphism of the Chlorides of Ammonium and Potassium.

—The salts of ammonia are isomorphous with the corresponding salts of potassa. If a solution of chloride of ammonium is evaporated and allowed to crystallize, feathery crystals are obtained, which on closer examination prove to be composed of small cubes. If chloride of ammonium is subjected to sublimation, a fibrous mass is gained, which evidently has a crystalline structure, though perfect crystals cannot be separated from it. There seems to me no reason why these fibres ought not to be considered as prisms. They readily split in the direction of their long axis, but break with difficulty transversely; two parallel prismatic planes may be obtained with little difficulty, but the other two, if four-sided, or the other four planes, if they should be six sided prisms, are usually uneven from adhering fibrous crystals, and cannot be readily recognized. From analogy, however, we have to conclude that they must be four-sided prisms.

The prismatic chloride of potassium has in some respects a similar behaviour. It is not so tough as the ammonium salt, and may be readily reduced to powder; but when it is heated until it decrepitates, the prisms chiefly split lengthwise, just like the fibrous crystals of chloride of ammonium behave under the pestle or the hammer.

These fibrous crystals cannot belong to the regular system, for the feathery crystals which are made up of regular cubes,

are easily rubbed into powder, and thereby show a marked difference from the fibres, although the composition of the salt is in both instances alike $=\text{NH}_4\text{Cl}$. Chloride of potassium $=\text{KCl}$, likewise contains no water of crystallization when crystallized in either form.

For the above reasons I consider both chlorides dimorphous, each crystallizing in the regular and the rectangular system, and isomorphous in both forms. But the difference between the two consists in the temperature at which the crystallization takes place; chloride of potassium crystallizes from a concentrated solution on and after cooling in prisms, while chloride of ammonium forms under the same circumstances cubes; at a higher temperature, when sublimed, the latter condenses in prisms while chloride of potassium is deposited from a hot, concentrated solution in cubes.

Acetate of Ammonia.—The Pharmacopœia orders the solution of this salt to be prepared by neutralizing diluted acetic acid with carbonate of ammonia. It is not very easy to arrive in this way at a precisely neutral liquid; test paper is of no avail, inasmuch as the solution shows an acid reaction even in the presence of a not inconsiderable amount of carbonate of ammonia, on account of the carbonic acid gas which is retained by the liquid. Constant agitation in a mortar will expel most of it, but if an excess of carbonate of ammonia was present, some bicarbonate will have been formed, which is entirely different in taste from the sesqui- and monocarbonate. To avoid an excess of ammonia, the solution is generally left slightly acid; but a better way would be to heat the diluted acetic acid to about 180° , and neutralize it at that temperature with the powdered carbonate.

A still easier method is to effect the neutralization with caustic ammonia, as is directed by most of the European Pharmacopœias. One measure of acetic acid may be diluted with three measures of water, neutralized with ammonia, and then diluted with water, so as to make altogether eight parts. Thus with a strip of blue litmus and of turmeric paper, the precise point of neutralization may be easily determined.

Separation of Iron from sulphate of Copper.—Sesquioxide of iron is precipitated from its solutions when boiled with acetate

of ammonia. Supposing that this behaviour might be made use of in separating, in an easy manner, iron from coppersalts, I made some experiments, but the result was not satisfactory. When acetate of ammonia is added to a solution of sulphate of copper, the color is changed to blue green, the color of the neutral acetate of copper; when heated, the liquid becomes turbid, and separates a considerable quantity of pale green basic acetate of copper, which is not taken up again by cooling, by the free acid of the liquid.

Solution of Iodine in aqueous Ether.—When iodine is dissolved to saturation, in washed ether, which has not been freed from water, the solution separates into two strata, the lower of which contains all the water.

Phosphate of Alumina from Nux Vomica.—A friend handed me a tasteless white powder, which was obtained from nux vomica, as the result of an experiment to prepare strychnia without alcohol. The acid decoction of nux vomica was precipitated by milk of lime, the precipitate treated with sulphuric acid, and the filtrate precipitated by an excess of ammonia. When analyzed, this white powder was found to be composed principally of phosphate of alumina, together with some phosphate of magnesia and lime, and a trace of perphosphate of iron; it contained not a trace of strychnia or brucia. It would be interesting to institute further experiments, whether the alkaloids can not be extracted in the manner described. On account of the presence of the earthy phosphates, the use of alcohol cannot be avoided by this process, but still it is curious enough why the alkaloids were not taken up by the sulphuric acid and precipitated by the ammonia.

Philadelphia, Sept., 1860.

ON THE EXPLOSIVE NATURE OF GLONIN OR NITROGLYCERIN.

BY CHARLES E. FERRIS.

To the Editor of the American Journal of Pharmacy.

DEAR SIR,—I have met with an accident (which nearly cost me my eye-sight) in the preparation of "Nitrate of the oxide of

Glycyle." I saw it mentioned repeatedly in the newspapers as a remedy for neuralgia; and as its mode of preparation was given, I found it in Gmelin's Handbook, page 501, vol. ix., under the name of Nitro-Glycerin, and prepared a small quantity according to the process described in Gmelin, and when I judged the process complete, added a large quantity of water and filtered the milky mixture. The water passed through leaving the oily liquid on the filter, which itself began to pass through, after a time. This was dissolved in alcohol, and precipitated by water, and allowed to stand to evaporate. After separation from the water and drying, it was dissolved in ether, and the solution set aside (after filtering) for the ether to evaporate.

After standing several days, and when there remained a very slight film of ether on the surface, I drew it up into a small pipette, and then closed the end of the jet tube by the blowpipe (of course inclining the tube so that all the liquid run into the bulb). There remained a small bubble of air in the tube below the bulb which I attempted to drive up by heat. While heating it gently over a gas flame for this purpose, it exploded with a deafening report, driving the glass in dust and fragments into my face and eyes, blowing out all the lights in the room, and throwing down a multitude of bottles from the shelves. The noise was so deafening that I have not yet, after a lapse of three weeks, recovered my hearing perfectly. There was only about $\frac{1}{4}$ dr. of the liquid in the pipette.

The only circumstance mentioned in Gmelin from which one might infer explosive properties, is the fact *mentioned* that it decomposes rapidly when placed in vacuo over oil of vitriol.

The explosion I think was due to an *instantaneous* decomposition.

I communicate to you these facts, to make what use of them you please. If the article is of sufficient importance to lead to general use, it will be important to be on guard against a similar accident in its preparation, and at any rate it is (as far as I am aware) another fact added to our knowledge of the substance under consideration.

Very respectfully,

CHARLES E. FERRIS.

New Castle, (Del.) Sept. 24, 1860.

ON THE PRODUCTION OF ATROPIA FROM AMERICAN GROWN BELLADONNA ROOT.

BY WILLIAM PROCTER, JR.

(From the Proceedings of the Amer. Pharm. Association, 1860.)

At the Meeting of the American Pharmaceutical Association, at Boston, September, 1859, I accepted the following question:

"The *Atropa Belladonna* is largely grown at New Lebanon, (New York,) for the preparation of the officinal extract. Can the root of the plant as grown there, be advantageously employed as a source of atropia?"

Through the kindness of Mr. Henry A. Tilden, of New Lebanon, several pounds of belladonna roots were collected in October last, and carefully dried after being transversely sliced in the manner of columbo root. These roots had a light ashen yellow color, and an odor analogous to that of stramonium roots, which in fact they in several respects resemble. The drug fairly represented the plant as produced in that locality, and was reduced to powder by grinding.

10,000 grains of the powdered roots were moistened with half a pint of alcohol of 85 per cent. packed firmly in a large glass funnel, suitably arranged for percolation, and covered with a disc of filtering paper. Alcohol of the same strength was now poured on from time to time, until ten pints of liquid had very slowly passed. The first six pints of liquor were kept separate from the last runnings. The tinctures were set aside (the weather being cool) until a convenient season. In about a week the stronger liquid commenced to deposit a crystalline substance on the inside of the bottle, which at the end of two weeks apparently ceased to increase in bulk. The liquid was decanted, the crystals detached from the sides of the vessel, washed with alcohol and when dried weighed 112 grains. Examined with a lens, the crystals were found to be a derivative of the oblique rhombic prism, and in fact to resemble cane sugar. They were soluble in water, had a sweetish taste, were colorless and brilliant, were charred by concentrated sulphuric acid, and when boiled with water containing a minute quantity of tartaric acid, easily reduced the oxide of copper, when Trommer's test for grape sugar was applied, thus leaving no doubt of their saccharine nature.

The alcoholic liquids were now mixed together, and one-fourth set aside. To the remainder, 360 grains of lime, previously hydrated and in powder, was added, and the vessel frequently shaken during twelve hours. The tincture from being light colored, became of a brown hue; it was filtered from the precipitate and excess of lime, and diluted sulphuric acid carefully dropped in, with agitation, until the liquid had a slight acid reaction. The precipitate of sulphate of lime and coloring matter, was separated by filtration, the alcohol distilled off by aid of a water bath heat, and the syrupy residue treated with ether to remove the fixed oil and resinous matter that it contained. The liquid separated from the ether was gently heated, to remove traces of that substance, and then half an ounce of carbonate of potassa, mixed with two fluid ounces of water, was added, shaken, allowed to stand for 24 hours, and filtered to separate the precipitate. This was washed with a little cold water, dried, and weighed only three grains. It appeared quite evident that either atropia existed in but small quantity, or that the precipitant used was not a proper one. Thus far, except in the ethereal treatment, the process is that of Mein.

Assuming that the atropia was yet held in solution, the liquid was mixed with three ounces of chloroform, and then solution of potassa added gradually, with frequent agitation, until, on resting, the aqueous supernatant liquid was decidedly alkaline, and of a dark, almost black color. The chloroform was now decanted, and by spontaneous evaporation yielded 24 grains of a fawn-colored crystalline matter, having an alkaline reaction, which in fact was atropia with coloring matter.

Believing that chloroform was the best agent for isolating the atropia, the remaining fourth of the original liquid was evaporated to three fluid ounces, diluted with its bulk of water, and filtered to separate oily and resinous matter. Half a fluid ounce of chloroform, followed by the same bulk of liquor potassæ, was added and well shaken for several minutes, and the chloroform decanted and allowed to evaporate spontaneously. The product was a greenish, amorphous, wax-like matter, possessing an alkaline reaction and weighing 18 grains. This consisted of atropia and oleo-resinous matter extracted by the chloroform. It was treated with half an ounce of water containing 20 drops

of diluted sulphuric acid, which was not sufficient to saturate the atropia, and ten drops more were added, the liquid filtered to separate the insoluble matter, and liquor ammonia dropped in till it ceased to produce a precipitate. The latter was a bulky hydrate of a light color; its exact quantity was not ascertained, but probably amounted to 10 grains.

The ethereal washings of the first liquid on evaporation yielded a fixed oil, of a greenish brown color, which was partially crystalline; and also a small portion of resinous matter. These were set aside.

In reviewing the last experiment, the disadvantage of treating the crude liquid with chloroform before the separation of the oily matter was quite apparent, and taking advantage of the fact that sulphate of atropia is insoluble in chloroform, I determined to modify the process by substituting chloroform for ether, as a means of removing the fixed oil, &c., which greatly facilitates the process, and affords the best and easiest method of obtaining this alkaloid that has been offered, which is as follows:

Take of Belladonna root, in fine powder, 10,000 grains.

Lime 480 grains,

Diluted sulphuric acid,

Chloroform,

Alcohol, each a sufficient quantity.

Moisten the powder with half a pint of alcohol, pack it firmly in a glass funnel, and pour on alcohol until a gallon of liquid has slowly passed. The lime having been slaked to powder by the addition of water, is added to the liquor and shaken at intervals for 24 hours. The alkaline reaction of the liquid is now removed by adding diluted sulphuric acid in slight excess, then filtered, and evaporated to three fluid ounces. After the evaporation the fixed oil separates on the surface as a crystalline stratum. The syrupy liquid was mixed with four ounces of water, thrown on a wetted filter, and sufficient water added afterwards to make the filtrate measure half a pint. This liquid, which had an amber color, a strong, disagreeable odor, and bitter acid taste, was agitated thoroughly with a fluid ounce of chloroform, and the latter decanted. A fluid ounce and a half of chloroform was again added, followed by repeated portions of liquor potassæ of half a fluid ounce each, agitating well after each addition until the

aqueous liquid on standing has a decided alkaline reaction and ceases to be clouded by the potassa. The chloroform is now decanted, and by spontaneous evaporation yields a crystalline fawn-colored residue of impure atropia, weighing 36 grains. By agitation with an additional portion of chloroform, three grains more of impure atropia is obtained. The atropia in this condition is dissolved in alcohol, shaken with half a drachm of purified animal charcoal, and after filtration mixed with a few drops of water and allowed to evaporate and crystallize.

The yield of purified atropia does not exceed 30 grains, or less than one-third of one per cent. of the root treated.

By evaporating the chloroform washings the fixed oil is obtained. This and the previous portion obtained by ether was redissolved in ether, filtered and evaporated by a gentle heat. The product was fluid at summer heat, had a dark brown color and disagreeable odor, and is at least partially the cause of the odor of the root.

Philadelphia, June, 1860.

APPARATUS FOR THE USE OF GAS AS FUEL IN PHARMACY.

BY EDWARD PARRISH.

No kind of fuel offers to the pharmacist, in the small processes of his shop and laboratory, such advantages and facilities of adaptation, as the carburetted hydrogen gas, supplied to most towns and cities for illumination. Where it is obtainable, this gas is generally cheaper than alcohol, less wasteful to use, and if properly applied, equally cleanly; in comparing it with any of the cheaper forms of fuel, its great facility of application, the fact of its being so readily ignited and extinguished, leaving no solid residue, and requiring no flue to carry off the gaseous products of its combustion, render the question of its mere cost comparatively unimportant.

As far as my observation has extended, these advantages have been so far appreciated as to lead to the employment of some form of gas-heating apparatus in almost every pharmaceutical store, where manufacturing is carried on; in laboratories for analysis and for practical instruction, this is equally the case,

and in an immense variety of processes in the arts, and occasionally in cooking, and the warming of apartments, this widely diffused fuel is employed.

It would extend this essay too much, and be foreign to its immediate object, if I should attempt a description of the various forms of gas-heating apparatus in common use; a notice of many of these will be found in the late edition of my work on Pharmacy. Nearly all are constructed on the principle of introducing atmospheric air with the gas into a cylinder, at the top of which it is lighted over wire gauze. Some, of recent construction, promote the thorough admixture of the gas with air, by modifications of the shape of the cylinder, or by forcing a draft of air through it; others by combining several small cylinders (Bunsen's) into one stove, or by terminating the ordinary Bunsen burner with a perforated disc, derive increased heat from the jet of gas, though often with a greatly increased consumption.



This cut represents McGlensy's patent, which is a modification of the Bunsen burner. Figs. 1 and 2 show a simple brass cylinder, with attachment for the introduction of the gas and a current of atmospheric air. The orifice of the burner is about $\frac{1}{4}$ of an inch above the top of the holes for the admission of the air, an important feature in determining the degree of force of the upward column of mixed air and gas. When this burner is used as a blow-pipe, or for any purpose requiring a concentrated heat, the gas is ignited at the top of the cylinder, and the flame burns with a slight blue color, and without smoke, rising under the full pressure three or four inches above the top.

The other figure represents a perforated disc for diffusing the flame, which constitutes McGlensy's improvement. This is an advantage for heating liquids in vessels, or cast iron plates such as are used for batter cakes, for heating sad-irons, or for radiating heat, as in warming apartments. These burners are highly recommended by many who use them, and are of a variety of sizes, burning from four to twelve or fifteen cubic feet per hour. It is claimed that one of them will boil a quart of water, in a tin

vessel, in ten minutes burning, at the rate of four cubic feet per hour.

For the purposes of the pharmacist, it is a desideratum to be able to get a high or low heat at pleasure, and except in a very few instances it is not desirable to concentrate the flame upon a limited surface, so that many of the appliances which produce the most complete and intense combustion of the gas are not well suited to his wants.

In studying this subject with reference to my own wants, and endeavoring to meet with a perfect form of apparatus for evaporation, decoction, and all the other applications of heat in the shop, I met with a furnace of English pattern upon which I think I have made an improvement, fitting it admirably to the ordinary uses of the pharmaceutical shop and laboratory. This is here figured.



Fig. 1 represents a small cast iron furnace of an English pattern, originally obtained from Smith & Phillips, London, into which passes, through a lateral opening, a burner of two rings, fig. 2, perforated at suitable distances with small holes. For all purposes requiring a moderate and diffused heat, as in the evaporation of the extracts and fluid extracts, and the distillation of the distilled spirits, this answers an admirable purpose. The scalloped rim allows the free passage of a draft of air from the flame when the furnace is covered by a receiving vessel, while the distance of the receiving vessel from the flame prevents the deposit of soot upon it, unless when the flame is near its highest, which it need not be for the purposes named. The star is a casting for laying over the throat of the furnace, adapted to holding small flasks or capsules over the jets of flame.

Fig. 3 and 4 represent two rings of cast iron, the lower of which fits accurately in the throat of the furnace, and is covered with wire gauze; the upper is a flange with projecting arms for

supporting vessels over it, and secures the gauze upon the inner ring.

I have added this contrivance with a view to operations requiring a more elevated temperature than that furnished by the combustion of the gas in jets from the ring-shaped burners. Being open at the bottom, the furnace allows a free ingress of air to mix with the gas, which being ignited above the diaphragm of wire gauze, produces perfect combustion without the least smoke, and with increased evolution of heat. The three upright supports attached to the outer ring will bear a heavy receiving vessel, and at the right elevation from the flame on the surface of the wire gauze.

This furnace may, of course, be connected by flexible tubing with the gas pipe from which it is supplied, and may be moved about on the counter or floor. Ordinary gum elastic hose may be very well slipped over the lateral pipe and on to an ordinary burner, without any metallic connections, ground burner, or mercury cup, the flow of gas being regulated by the stop-cock on the permanent gas fixture to which it is attached. The consumption of gas by this burner under ordinary circumstances of pressure, with a full head turned on, is from seven to ten cubic feet per hour, though this head will smoke without the use of the wire gauze attachment; for evaporation, without the attachment, a much smaller consumption is required. An idea of the heating capacity of the full head may be gained from the fact that a gallon of water in a pharmaceutical still of tinned iron, placed on the projecting arms over the wire gauze, was raised to the boiling point in thirteen minutes, though in an uncovered enamelled iron vessel it required near twenty minutes.

One advantage from the use of this furnace, without the wire gauze attachment, for operations requiring a low heat, is that the jets are not materially affected by the wind, which on a surface of wire gauze is apt to blow out the flame whenever much reduced. The cast iron rings are also an improvement on common methods of adjusting, securing, and renewing the gauze; no tripod is necessary for supporting the vessel to be heated, either with or without the wire gauze arrangement, and the strength and durability of the whole apparatus recommend it above the ordinary iron, tin, or even copper cylinders.

ON THE PREPARATION OF EMPLASTRUM ASSAFETIDÆ.

BY WILLIAM PROCTER, JR., OF PHILADELPHIA.

(From the Proceedings of the American Pharmaceutical Association—1860.)

The following remarks are in reply to the tenth query of the list of questions offered at the meeting of 1859, viz:—

“What is the best process for preparing Assafoetidæ Plaster so as to preserve the activity of the drugs unimpaired?”

The present process for this plaster (U. S. P.) is as follows:—

“Take of Assafoetida, Lead-plaster, each a pound.

Galbanum, Yellow-wax, each half a pound.

Alcohol, three pints.

Dissolve the assafoetida and galbanum in the alcohol by the aid of a water bath; strain the liquor while hot, and evaporate to the consistence of honey; then add the lead-plaster and wax, previously melted together; stir the mixture well, and evaporate to the proper consistence.”

Theoretically, about two-thirds of the weight of assafoetida is soluble in alcohol; practically, even with the aid of heat, the residue is quite bulky, even when the gum-resin is malaxated in a mortar with the solvent; and the tears are difficult to disintegrate without that precaution. If this residue is separated and washed with alcohol, and the alcoholic liquid evaporated with care, and incorporated with the melted ingredients as directed, a good plaster results. The objections to the process are the slow action of alcohol, and the greater or less loss of volatile oil by the evaporation, if at the temperature of the water-bath. In view of these objections the use of other solvents has been suggested. *A priori*, benzine, so noted for its solvent action on resinous bodies, was supposed to be a cheap and appropriate menstruum, and was tried, but found to be entirely inapplicable, as its solvent action was very slow, hardly altering the shape of the particles or fragments. Chloroform was next used with entire success; it rapidly broke down the gum-resin, dissolving all its oily and resinous matter and leaving the gum as a flocculent powder. The proportion tried was two parts, by weight, to one of the resins, which were operated on separately to ascertain the relative solvency in the menstruum, and they were found equally affected by it.

Ether was then tried and found to greatly exceed alcohol in its ability quickly to dissolve out the resinous matter from the

gum-resins, but was required in larger proportion than chloroform. Brandes found two resins in assafetida; one of which, existing in small proportion, was insoluble in ether and tasteless, and, although the residue left by ether is more bulky than that of chloroform, its much lower cost is greatly in its favor as a menstruum. The great volatility of both these liquids enables the evaporation to be spontaneous, if operating in small quantities, or, if the liquids are to be recovered by distillation, permits of its being done by a water-bath, without injuriously volatilizing the essential oils.

But the assafetida plaster frequently met with differs from that of the U. S. Pharmacopœia, by containing the gummy as well as resinous part of the drug,—apparently being made by liquifying the assafetida by a hydro-alcoholic menstruum and straining out any gross impurities, and then concentrating to a thick consistence before incorporating with the plaster and wax. Such plaster, when melted with the plaster spatula, is apt to coagulate or separate, owing to the infusibility of the gummy particles.

In view of these results, the following modification of the official formula is offered for acceptance:—

Take of Assafetida,

Lead-plaster, each, twelve ounces.

Galbanum,

Yellow-wax, each, six ounces.

Ether, three pints.

Alcohol, a pint.

Thoroughly bruise the gum-resins in a mortar, put them in a suitable bottle, pour on the ether, and agitate frequently until the oleo-resinous portion is dissolved and a fawn-colored pulverulent residue remains as a sediment. Having placed a close cotton flannel or lint filter in a suitable funnel, empty the contents of the bottle in it and cover it closely. As the ethereal liquid gradually disappears, pour on the alcohol, and when it has ceased to pass, evaporate or distil the filtered liquid with a gentle heat until it acquires the consistence of honey and has lost an ethereal odor. Then, having melted the lead-plaster and wax at a moderate temperature, add the oleo-resins and stir constantly until cooled. Thus prepared, assafetida plaster has a fawn color when recent, which darkens by age and

exposure ; it has a decided odor of both drugs, and is efficient as a topical anti-spasmodic. The well-known change of color, or reddening, which the principal resin of assafetida undergoes by contact with the atmosphere, soon becomes apparent in the evaporated resinous extract from the gum-resins, and it is desirable not to expose the mixture longer than is needful to accomplish the evaporation of the ether and alcohol.

Philadelphia, September, 1860.

ON GARLIC—(ALLIUM SATIVUM.)

By ROBERT P. THOMAS, M. D.,

Prof. of Materia Medica in the Philadelphia College of Pharmacy.

(From Proceedings of the American Pharmaceutical Association—1860.)

(With a plate.)

At the last Annual Meeting of the Association, the query whether "the varieties of garlic in use in Philadelphia are modifications of the same plant, or distinct species," was referred to me for investigation. It may be premised, that we constantly meet in the stores of this city, as well as upon the vegetable stands in the market-houses, with bulbs of garlic, so different from each other in size and general appearance, as to have occasioned much speculation respecting their origin.

With a view of eliciting the practical experience of market-gardeners upon this subject, extensive inquiries have been made of those engaged in the cultivation of garlic, but the information thus obtained is so diverse and conflicting, as to be of little positive value. To the question : Do two varieties of garlic grow in your garden ? the answer almost uniformly has been—We only raise one, but there is a great difference in the size of the plants and roots. The general impression among them seems to be, that no real difference in species exists, the diversity in size being referable to circumstances,—such as the nature of the soil, quantity of manure, &c. A similar diversity, it is said, is witnessed in the growth of all the vegetables cultivated for daily table use.

One gardener, somewhat celebrated for her knowledge of horticulture, informed me that the two plants were certainly not identical, as she could readily distinguish them in the growing state at a distance of many feet. It being evident that no conclusive evidence could be procured on the subject, I resolved to

raise a few plants and thus obtain some tangible proof. Accordingly, four cloves of one of the large bulbs, and a similar number of a small one, were planted in a large garden at considerable distances apart, and all were so marked as to prevent a subsequent confounding of the different plants. Each grew vigorously, but before they had obtained half of their growth, a striking difference between the produce of the respective bulbs was evident to the observer, and a confirmation afforded of the remark quoted above, that the growing plants could be distinguished from each other at a distance of many feet, indeed, I might say, as far as they could be seen. The one presented all the characteristics of the true garlic; the other looked so much like thriving onion-plants, as to be constantly mistaken for them by casual visitors. The close observer, however, noticed that the ventricose stem of the onion was wanting, being replaced by the round solid stem of the garlic. Between the large plants, and the leek (*Allium porrum*,) the resemblance was still more apparent. It may be mentioned that the four plants derived from the cloves of the large bulb presented like characters; while the progeny of the small bulbs were also accordant in their peculiarities, but dissimilar to the offspring of the large. The period of inflorescence was not alike in both; the small or true was variety in head ten days or two weeks in advance of the large.

The following description of these varieties, made from recent specimens, is arranged in such a manner as to enable the eye of the reader to recognize the close correspondence in the written histories of two plants, which in their growing state presented such striking differences in size, general appearance, and time of inflorescence.

SMALL OR COMMON GARLIC.

Bulbs, compound, small, consisting of eight to twelve cloves of nearly uniform size, surrounding the stem, and enclosed by common membranous envelopes. Each clove has, also, its own specific covering. The bulbs range from $\frac{3}{4}$ of an inch to $1\frac{1}{4}$ of an inch in diameter.

LARGE GARLIC.

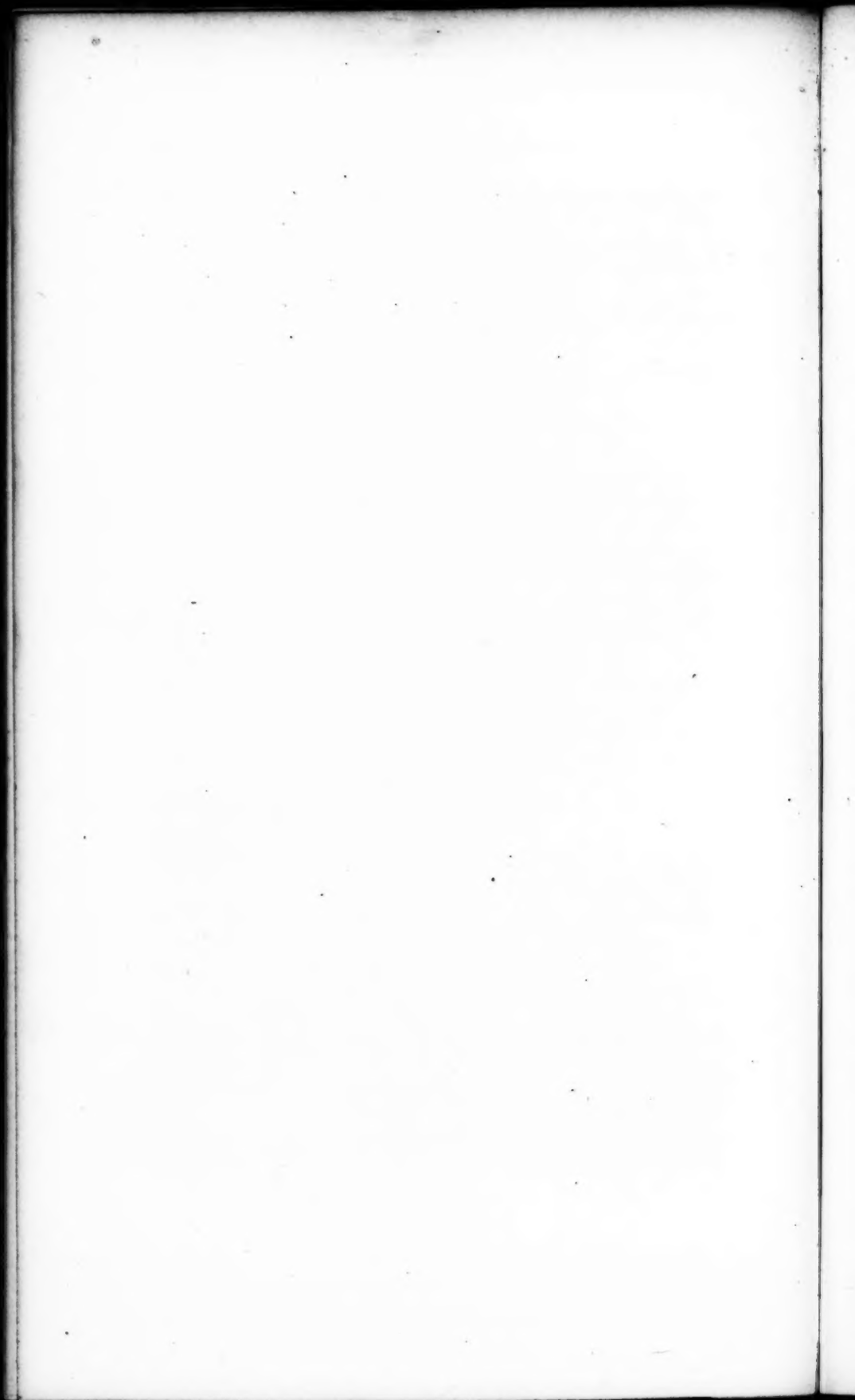
Bulbs compound, large, some weighing four to six ounces, and measuring two to four inches in diameter. Cloves, four to eight in number. Four of them are usually well developed, the remainder are much smaller. Each has its own covering, and all are arranged around the



Flower, highly magnified.

*Perianth laid open, showing the alternate
stamens.*

ALLIUM SATIVUM [HYBRID]



In both varieties the cloves common stem, with common present a concentric arrangement internally, and a small, membranous envelopes. vertical canal in the centre.

Stem round, herbaceous, 2 feet—2 feet 6 inches high, $\frac{1}{2}$ — $\frac{1}{2}$ inch in diameter at base, lower third sheathed with leaves.

Leaves, sheathing, linear, lanceolate, 12—15 inches long, $\frac{1}{2}$ — $\frac{3}{4}$ inches broad, nearly flat, though somewhat channeled above, striate, smooth, entire, margins bordered by very fine stiff hairs.

Spathe, ovate, membranaceous, with a long acumination.

Flowering heads umbelliferous; the flowers being intermingled with numerous spathaceous, proliferous bulbs.

Pedicels, pale purple, $\frac{1}{2}$ —1 inch long.

Perianth, pale purple, 6-parted.

Filaments 6, viz., 3 single, and 3 tricuspidate. Anthers incumbent.

Ovary, superior; capsule 3-celled.

Style, subulate.

Stigma, simple.

Flowers early in July. Fruit, latter part of August.

Stem round, herbaceous, 5—6 feet high, one inch in diameter at base, lower third sheathed with leaves.

Leaves, sheathing, linear, 18—24 inches long, $1\frac{1}{2}$ inches broad, midrib prominent below, striate, smooth, entire, margins and midrib clothed with very fine stiff hairs.

Spathe, ovate, membranaceous, with a long acumination.

Flowering heads umbelliferous; the flowers being small and numerous. No bulbs are found in these heads.

Pedicels, pale purple, slender, 1— $1\frac{1}{2}$ inches long.

Perianth, pale purple, 6-parted.

Filaments 6, viz., 3 single, and 3 tricuspidate; the alternate filaments being wide at base, and bearing the anther on the middle filiform segment. The alternate stamens are longer than the perianth.

Ovary, superior; capsule 3-celled.

Style, subulate.

Stigma, simple.

Flowers late in July. Fruit, in September.

The foregoing comparison of the plants yielding the two kinds of garlic, shows a strict accordance between them on most botanical points. It will be observed, however, that the stem, leaves, and bulb of one are nearly twice as large as the corresponding parts of the other. Furthermore, neither of the four large plants presented a single bulb in the flowering head, while every one of the plants, from small root-bulbs, exhibited many of them in each head.

In smell and taste they also differ, the large variety bearing more resemblance in these respects to the leek, than to the true garlic.

As the genus *Allium* includes more than sixty species, botanists have found it necessary to adopt several subdivisions in the grouping of the species; and one ground of separation, adopted in Miller's Gardener's Dictionary, is founded on the presence or absence of bulbs in the flowering tops. According to this arrangement, there would be perfect propriety in considering the two plants in question as belonging to different species. But a careful examination of the entire plants shows that such a classification would be incorrect; for, although differing in one important particular, they harmonize exactly in many others.

All of the aerial portions of the large plant exhibit a striking similarity with the corresponding parts of the leek, while the underground portions bear an equally close resemblance to the true garlic.

Not being able to find in any of the standard works on botany the proper authority for considering the two plants as representatives of distinct species, and being satisfied from my own observations that they are not the same, I am led to the conclusion that the large plant may be justly esteemed as a hybrid, partaking of the nature of the garlic and the leek.

Entertaining this view, it is easy to account for the opinions of the market-gardeners, who speak of them as being identical. The hybrid, having been once formed, would be self-propagating from its cloves, which being planted indiscriminately with those of the true garlic, would produce, from year to year, a mixed crop, in which the unsuspecting eye would recognize no other difference than that of size; the cultivator merely supposing that he has large and small bulbs, from accidental circumstances of

growth, just as he has large and small potatoes produced from similar eyes.

[Since this article was printed in the Proceedings of the Association, Dr. Thomas has made the following further observations in reference to the imperfect fruiting of the new garlic.—
EDITOR AM. JOURN. PHARM.]

Capsule supported by the persistent *perianth*, 3-angled, splitting at the angles into three valves. Each valve is subdivided by a central dissepiment into two compartments, each of which contains a single aborted seed. The capsule is 3-celled, each cell being completed by the junction of two adjacent valves. A careful examination of the capsules of two entire heads failed to detect a single perfect seed.]

REMARKS ON THE PREPARATION OF SOME NARCOTIC EXTRACTS.

By WILLIAM S. THOMPSON.

In the Pharmacopœia of 1850 the extracts of the leaves of several narcotic plants, viz.: aconite, belladonna, conium, hyoscyamus and stramonium, are directed to be prepared after two different methods: first from the fresh leaves by inspissating the juice previously heated to the boiling point to remove the albumen. Preparations of this class are termed *extracts*. Extracts of the other class are designated by the prefix *alcoholic*, and are prepared from the dried leaves treated by percolation with diluted alcohol. Of the two processes the latter is doubtless preferable, and when the plants are gathered at the proper period and carefully cured, afford preparations unexceptionable, both as to therapeutical efficacy and permanence of condition.

In England where the cost of alcohol is so great as to almost preclude its use in the preparation of extracts, the plan of preparing them from the juices of fresh plants is extensively practised. In this country, where there is no excise duty on alcohol, it is within the reach of every pharmacist at a comparatively low price, and no good reason exists why the inspissated juices or watery extracts should be retained in the Pharmaco-

pœia. Of the superiority of the alcoholic extracts in point of medicinal efficacy there cannot be a doubt, as numerous practitioners of medicine in this city can testify from actual experience. No better evidence of the uncertainty of the inspissated juices or watery extracts, can be given than the statement of Pereira, who, after alluding to the processes of the British Pharmacopœias for extract of hyoscyamus, says: "The quality of this preparation as met with in the shops, is extremely variable. This arises principally from the unequal care with which it has been prepared. The dose is from gr. v. to ʒj; occasionally much larger doses have been taken without any injurious effects." Speaking of the same extract Prof. Wood says: "Like all the inspissated juices it is of variable strength, according to its age, the care used in its preparation, and the character of the leaves from which it was procured." With such testimony as the foregoing as to the uncertainty of strength of the inspissated juices, may not the questions be asked with propriety, why should they retain a place in the Pharmacopœia? and in view of the more certain and uniform strength of the alcoholic extracts, why should not they be exclusively used? In the latter case, physicians would not be under the necessity of testing the strength of each new sample, by gradually increasing the dose until the desired effect is experienced. With reference to the permanence of these extracts made by the alcoholic process, my own experience has been that they keep well, and undergo very little change, except in losing their soft condition to some extent when kept in a warm place. Alcoholic extract of aconite has been known to act promptly and efficaciously after having been prepared at least ten years. On the contrary, inspissated juices have been known to become mouldy and to acquire an odor not natural to the plants from which they were produced; thus showing that they were undergoing decomposition, and that they contain within themselves the element capable of producing it. Medical men have frequently been heard to complain of the inefficiency of extract of belladonna, when used for dilation of the pupil, the preparation in question being the inspissated juice; while on the contrary, the alcoholic extract has been known to act promptly in the same case. Numerous instances might be

cited to prove the superiority of the alcoholic extracts, but the matter being in the hands of the Committee of Revision of the Pharmacopœia of 1860, will no doubt receive proper attention.

It is now proposed to vary from the process of the Pharmacopœia in the preparation of alcoholic narcotic extracts, as follows, taking for the type extract of hyoscyamus:

Extract of Hyoscyamus.

Take of Hyoscyamus leaves in coarse powder, 12 ounces.

Alcohol, 2 pints.

Water, a sufficient quantity.

Moisten the powdered hyoscyamus leaves with part of the alcohol, let it stand 24 hours in a covered vessel, then transfer to a displacer, and add gradually the remainder of the alcohol; reserve what passes through after the addition of the alcohol, and set it aside for spontaneous evaporation. Displace the remainder with water to exhaustion; evaporate this portion in a water-bath to the proper consistence; and add the portion which was previously set aside, and mix the whole thoroughly. The other narcotic extracts may be prepared in the same manner.

By adding strong alcohol to the leaves at the commencement of the process, the chlorophylle or green coloring matter of the leaves is extracted, which when added to the other portion and thoroughly incorporated with it gives the extract a fine green tint, without affecting its sensible properties or adding materially to its weight. Stramonium ointment of very superior quality, fine color and appearance may be made from extract of stramonium prepared after the above manner.—*Jour. Md. Col. Pharm., Sept., 1860.*

ARSENIC IN A DRINKING WATER.—NOTE ON THE ARSENICAL
WATER OF WHITBECK, CUMBERLAND

By ARTHUR H. CHURCH, F. C. S.

The recent reliable accounts of arsenic eating in Styria, the controversy as to the effect on the Thames water of arsenical perchloride of iron, and the detection of arsenic in numerous mineral waters and deposits, invite special notice to the occur-

rence of this element. And now that the influence on the animal economy of arsenic in minute but repeated doses is attracting so much attention, I think that the following account, incomplete as it at present is, of an arsenical drinking water, will prove interesting. My attention was first directed to the subject by the Rev. Mr. Wilkin, of Booth, to whom, as well as the Rev. Mr. Ormandy, of Whitbeck, and Dr. Fidler, of Whitehaven, I am indebted for much information and assistance.

From the northern and western sides of Black Combe, a mountain in the southern part of Cumberland, situated near the sea, numerous streams or *becks* originate; I believe that one only of these exhibits any marked peculiarity. Whitbeck, such is the name of this stream, is fed by several small springs, and it was from the source of the most southerly of these where it rises from the ground, and at an elevation of about 900 feet from the sea, that I obtained a specimen of the water for examination. On the 29th of June in the present year, the water, at the time of collection, had a temperature of $8^{\circ} 5'$ C., the air being $10^{\circ} 6'$. The reaction of the water as it issues from the earth was faintly but unmistakeably alkaline: on testing the water after ebullition the effect was more decided. The water from many other sources in the neighborhood of Whitbeck, where decomposing granite is of common occurrence, has an alkaline reaction. A large and deep pool in the course of Whitbeck towards the sea shows the color of the water to be a rich clear greenish blue.

The water, on examination, gave distinct indications of the presence of arsenic. This element, which here probably exists as an alkaline arsenite, occurs not as a mere trace, but in determinable quantity. I have not yet ascertained the amount present, but hope to do so shortly, when I have obtained specimens of the water collected at different seasons of the year. I have satisfied myself, however, that in some seasons of the year the quantity present approaches a good fraction of a grain of arsenic (metallic) in each gallon of water. At the same time I am desirous of furnishing complete analyses of some interesting minerals obtained from the vicinity of the spring.—For on ascending the gulley, a few yards above the source of Whitbeck, we arrive at the entrance to a mine, which, some

years ago, was worked for cobalt and copper, and is now again being searched. Here I obtained very rich and massive silver-white arsenical cobalt ore, and also copper pyrites. The neighborhood for some miles is in fact rich in minerals. Dr. Fidler writes: "Almost immediately behind Whitehaven Parsonage a sulphur vein crops out, a continuation of the same vein that is being worked at Under Hill, but whether it exists in any quantity I do not know. There are three or four copper veins in a ravine behind Whitehaven Mill, one of which has been tried some twelve or fifteen fathoms below the surface." Baryta, also, has been found I am told, above the source of Whitbeck in the mine above-mentioned.

It will be seen that the arsenic in the water of Whitbeck is thus most probably derived from the veins of arsenical cobalt ore through which it percolates.

The arsenical water is *habitually used for every purpose* by the inhabitants of the little village of Whitbeck, and, as far as I can learn, with beneficial rather than injurious results.—But it is remarkable that Whitbeck, though in every respect suitable for trout, is the only stream in the neighborhood from which that fish is absent; eels, however, have been found in it. Ducks will not live if confined to this arsenical water. When the railway was being carried past Whitbeck, the first use of water quickly produced the usual marked effect on the throats both of the men and the horses employed on the works. The soreness of mouth from which they at first suffered soon, however, disappeared, and in the horses gave place to that sleekness of coat assigned as one of the effects produced by the administration of arsenic. It is a question how far the rosy looks of the Whitbeck children, and the old age which a large proportion of the inhabitants of the village attains, are to be attributed to the arsenic present in the water they drink.—*Chem. News, London, Aug. 25, 1860.*

THE ESSENTIAL OIL OF CITRUS LUMIA.

The Citrus Lumia, or sweet lemon, is common in Sicily and Calabria. In external appearance very like the common lemon, the fruit differs by containing a sweet instead of an acid juice.

The odor of the rind differs too from that of the common lemon, and also from the orange; it resembles bergamotte, but is not so powerful. The oil is prepared at Squillace, in Calabria, by pressing the rind of the fruit. It has a very deep yellow color, but, when distilled, the coloring matter remains in the retort. The first portions distil between 130° and 180° , and they contain water; the greater part passes between 180° and 190° ; at a higher temperature vapors with an empyreumatic smell come over. The residue, and the first portion which passes, contain oxygenated compounds. M. de Luca, from whose paper we quote, has made the following experiments with the portion which, on rectifying the oil, passed exactly at 180° . It is lighter than water, and insoluble in it, but on agitating imparts its smell. It is slightly soluble in alcohol, and freely so in sulphide of carbon and ether. It turns the plane of polarisation to the right. Its sp. gr. at 18° C. = 0.853. The composition is represented by the formula $C_{20}H_{16}$. Mixed with alcohol and nitric acid it becomes hydrated, and in time furnishes a crystalline matter. Heated with nitric acid, nitrous vapors are given off and yellowish resinous matters are produced. Dry hydrochloric acid gas, as well as a concentrated solution of the same acid, act on it at the ordinary temperature, and furnish liquid and crystallised compounds, the crystallised compound being a bihydrochlorate, $C_{20}H_{16} \cdot 2HCl$, for it contains about 34 per cent. of chlorine.—*Chem. News, London, Sept. 1, 1860.*

COMPOSITION OF CACAO.

Tuchén has analysed various specimens of cacao to determine the amount of theobromine they contained. His results are as under⁵:—

	Fatty matter.	Theobromine.	Ash.
Guayaquil . . .	36.38	0.63	3.03
Surinam . . .	36.97	0.56	3.00
Caraccas . . .	35.08	0.55	2.92
Para . . .	34.48	0.67	3.00
Maragnow . . .	38.25	0.38	2.92
Trinidad . . .	36.42	0.48	2.98

Chem. News, London, Aug. 11, 1860, from Chim. Technol.

ON A NEW FORM OF CHLORIDE OF SODIUM.

BY RICHARD V. TUSON,

Lecturer on Chemistry at Charing Cross Hospital.

That chloride of potassium, which ordinarily crystallizes in cubes, is nevertheless often found as an efflorescence on various vegetable extracts assuming the acicular form, is well known. Hitherto, I believe, the corresponding compound, chloride of sodium, has never been observed in needle-shaped crystals, but nearly always in cubes. Occasionally, however, it deposits from urine in octohedra; and when a solution of the salt in water is evaporated at a temperature not exceeding 14° F., it crystallizes in hexagonal tables (Ehrenberg), which contain, according to Fuchs, six equivalents, but according to Mitscherlich, four equivalents of water of crystallization. At temperatures above 14° F. these hexagonal crystals lose their water of crystallization, and are resolved into a congeries of minute cubes. Chloride of sodium, it is also stated, may be obtained in large oblique rhombic prisms, having the formula $\text{Na Cl} + 4\text{Aq}$. They effloresce in air below 32° F. (Mitscherlich), deliquesce (? effloresce) in air above 32° F. (Fuchs), and leave a powder of small cubes.

Lately, on opening a tightly-fitting tin box in which a quantity of salmon-roe paste had been allowed to remain for nearly three years, it was found that the organic matter was covered by an efflorescence of acicular crystals. One of my pupils collected some of these crystals, analyzed them, and pronounced them to consist entirely of chloride of sodium. As I had never heard of chloride of sodium crystallizing in needles, their examination was repeated, but still the same results were obtained. Some of the crystals were next dissolved in water, and the solution produced submitted to spontaneous evaporation, when the whole of the salt deposited in the ordinary, or cubical form. This result, therefore, fully confirms the conclusions deduced from analysis. The crystals, some of which are nearly half an inch long, appear to be rectangular prisms, terminated by four-sided pyramids. They are beautifully clear, transparent, colorless, elastic, longitudinally and transversely striated, and many are bent or contorted in a manner similar to the native hydrated

sulphate of lime, called selenite by mineralogists. The acicular crystals are anhydrous, and undergo no change in form or diminution in transparency when exposed to air at ordinary temperatures, or even at a low red heat. The needles of chloride of sodium possess one property, which is a very familiar characteristic of the cubical salt, namely, that when heated they decrepitate.

It is singular to remark that, at all events, as far as we know at present, the acicular varieties of the chlorides of potassium and of sodium are only developed in the presence of organic matter, just as the production of octohedral chloride of sodium appears to be due to the solution from which it crystallizes, containing urea.

Since writing the foregoing, I have observed an efflorescence of acicular chloride of sodium on an animal deposit which was sent me for analysis, and which had been originally mixed with a solution of common salt to prevent its undergoing putrefaction.—*London Pharm. Journ.* August, 1860.

PHARMACY IN PIEDMONT.

By SUTTON SHARPE.

A tour through Piedmont during the memorable days of last year's campaign, as a privileged follower in the footsteps of the French army, brought me in contact with our brethren in regions rarely, if ever, trod by the most erratic of our race. The rapid retreat of the Austrians across the Ticino, and the forced marches of the allied army in their pursuit, however, gave me few opportunities to obtain materials, as towns and villages were often passed in the dead of night, and it was only at Alessandria, Novara, and Turbigo, that the bivouac was sufficiently long to allow time for observation. But a still later visit in the less interesting capacity of *commis-voyageur* offered me every facility for examining into the condition and resources of the Piedmontese chemist; a mortal by no means the most enviable in the legion of Galen's disciples. The principle of compulsory examination has long existed throughout Europe, imposed with more or less severity as necessity may suggest; and one marvels that in England contending elements should

have so long prevented the adoption of an ordeal amongst the best of the progressive tendencies of the age. The law in Piedmont, however, differs in many respects from that of France and Germany. In Piedmont every large town, Genoa, Nice, Chambery, and others, possess their laboratory and professors chosen from amongst the most eminent chemists of the place, and forming a local institution holding the same privileges as the supreme school at Turin, with the exception that to commence business in the capitol it is necessary to be a licentiate of its school, by far the most esteemed on account of the extended facilities offered to the student. Since the passing of an act in 1853, it is enforced that every one intended for the calling of a chemist must produce a certificate of bachelor from some recognized college, as a guarantee that his private education has not been neglected. An apprenticeship of five years is required, and if three of these be devoted to study and attendance at the laboratory and lectures, the student may present himself for examination; but it more frequently happens that only the last year of apprenticeship is at the student's disposal, after which we find him located for the remaining two years in some garret of unknown altitude in the Via San Carlo, or the miserable streets that surround the Tempio Valdese, the abject type of that race of *étudiants* who people the Quartier Latin in Paris—youths with long hair and picturesque threadbare coats, poor, improvident, and ambitious, struggling with every necessitude of fortune, and exposed to vice in its most hideous form. But our poor Sardinian has not the resources of the disciples in Paris, and the ordeal through which he has to pass on the day of examination presses heavily on his mind, for it is only by unwearied application he will be prepared for the presence of that goodly host of *savans* who sit in the Via di Po, for the examinations are prosecuted with much severity. We were present upon one occasion when an unfortunate Genoese came to grief for not knowing that madder contained alizarin and xanthine, and another was plucked for his ignorance of the atomic theory and hydrometrical equivalents. Thinking men have long protested against the pernicious effects produced by examinations so purely theoretical, and which affect the best interests of the future man of business. Dr. Preuss tells us that the dragoons of

Frederick the Great were taught trigonometry, but we question if it ever served them on the battle-field, and whether at Molwitz they would have been so disgraced if they had been taught that which is useful before that which is beautiful. The Piedmontese chemist is eminently theoretical, and, at the same time, eminently poor; the atomic theory and hydrometrical equivalents do not aid him in a community of peasants, amongst whom, perhaps, he is destined to live. Science has exalted him above the sordid details of every-day life, and the philosopher's stone is an elusive research which brings no grist to the mill.

The number of pharmacies is limited according to the population; thus we find in a statistical table, in the *Giornale di Farmacia*, of January, 1859, the proportionate number of chemists in the towns and provinces. Turin, with a population of 179,600, has 50 pharmacies, yielding 3592 for each. In Nice there is one for every 2629; in Novara, one for every 1810; while at Cuneo and the villages, where the inhabitants are isolated, the number of inhabitants to each pharmacy sometimes reaches 4000. The restrictive character of this provision, to protect the chemist from a destructive competition, necessarily gives increased value to houses of reputation in populous towns; and at Turin large sums, exceeding sometimes three or four thousand pounds, are paid for a business and patent. Few young men, however, can be found with capital sufficient for entire purchase, so that a system is general throughout the states, by which the payment is extended over a period varying from ten to twenty years, secured upon the property, which, by the protective law, cannot decrease in value; but this facility of payment has the result of giving a false value to a business, which, after all, yields but a miserable return. The pharmacies are examined annually by government inspectors, who investigate the quality of the drugs employed, and that all poisons and active preparations be kept separately and under lock and key, according to the regulations of the act. But the most lamentable obstacle against which the man of business has to contend, is the tariff instituted by the Council of Health in 1853, for the regulation of the price of medicines and pharmaceutical preparations, and which produces the most pernicious effects, and paralyses the efforts of those who, by a healthy competition,

seek to rival their less intelligent neighbor. This tariff, open to public inspection in every pharmacy, has for its end the prevention of exorbitant prices, by a fixed standard, unaffected by the fluctuations which continually occur in almost every product, and which in reality has the effect of creating imposition rather than subduing it; thus the authorized price of quinine is two shillings and sixpence, the scruple, camphor more than a shilling an ounce, which could be sold for half the price, while many products in this anomalous scale are marked much lower than cost price. Leaving Turin, with its neat-looking pharmacies, decorated with mahogany fittings, white marble counters, and graceful urn-like vases, rich but not gaudy, one is surprised at the extreme poverty one encounters at Genoa, the richest city in the state, and of a commercial importance exceeding any other town on the Mediterranean, Marseilles excepted. The best chemists' shops in the place, to which the much-vaunted establishment of Mojon scarcely forms an exception, resemble the *spezierie* in the almost deserted districts of Vicenza and Verona, where one feels oppressed by a sense of poverty or some worse curse, resulting from Austrian domination, which seems to cripple the vitality of every enterprise—*boutiques* that that would disgrace the oft-calumniated districts of St. Giles and the Minorities. This indigence is accounted for at Genoa by the active competition of several wholesale drug warehouses, which, besides alimentering the provinces with their products in parcels resembling the "foul linen" of some disorderly bachelor tied up by the four corners, retail to the Genoese public *à buon prezzo*, much to the detriment of the legitimate vendors. But it is in the interior where the pitiful condition of our brethren would draw forth sympathy from the most uncharitable, where Romeo would have found a hero at every step "in tatter'd weeds," with overwhelming brows, the type of that fragile wretch at Mantua who sold poison against the law, forced by grievous fortune to confess "my poverty but not my will consents." It is at Tortano, Voghera, Aste, the land of effervescing white wine and shoeless women, Savona, Moriana, Pallanza, where almost every pharmacy tells a tale of woe; its small front filled with miniature squares of glass, painted black, often untouched since its foundation, as if in mourning for a liberal profession

fallen low from its high estate, the brick or flagstone floor, ill-shaped bottles filled with mysterious liquids, and labelled with the vilest caligraphy, and about his shelves a beggarly account of empty boxes, green earthen pots, and, lastly, the pale, mysterious-looking proprietor, wearing a low-crowned Turkish-looking hat, eternally smoking in his little back room, often unmoved by the spasmodic ringing and knocking of him who may require his aid, a passive creature of the present, forgetting the future while he indulges in his *dolce far niente*—a curse that enervates the whole Italian family. The resources are limited, medicine is not *à la mode*, life is less artificial in the interior, retaining even primitive simplicity, medicinal plants everywhere flourish, and which instinct or custom has led a great part of the population to employ. The pulp of tamarinds and cassia are the popular remedies—the panacea for all the ills that “flesh is heir to.” Their belief in medicine rarely reaches to Epsom salts, while rhubarb and magnesia are looked upon as contemptible drugs; thus in the provinces the pharmacien is reduced to the necessity of retaining for sale a host of articles not less numerous than the miscellaneous horrors of a marine store. Even in Alessandria, a town of fifty thousand inhabitants and a strong garrison, the principal chemist of the place, who resides in the Piazza Largha, would fail to obtain a living were it not for the accessories of an Italian warehouse—tea, coffee, sugar, &c.; and we know a chemist in a not far distant town who exercises the functions of altisonant town crier, while another is a renovator of faded habiliments. During the short days of last year’s invasion the unfortunate chemist was generally the first victim of Austrian exaction; the secret of his varied resources was found out, for his shop contained a little of everything; as the rapacious Yagers expressed themselves, “Diese apothecker, haben ein wenig von allem;” and although his shop contained few drugs, which were invariably respected, butter, cheese, and dubious-looking anchovies were in abundance. Well do I remember at the battle of Palestro, in company with a surgeon of the 3rd Zouave Regiment, pushing our way into the village through hundreds of dead and dying in search of a little ammonia to apply to a poor sergeant who had fainted from loss of blood resulting from a flesh wound in the

thigh, for the ambulances were still in the rear; the shop was deserted, but we espied the eye of the proprietor glistening through the gratings of a dark cellar where he had hid himself; there was still desultory firing on the left upon the retreating Austrians, who had evacuated the town, chased at the point of the bayonet by the impetuous Zouaves. Although assured everything was safe, entreaty failed to tempt him from his hiding-place until a Sardinian regiment marched past; he opened his shop, and to our astonishment no ammonia was to be found, its use had not penetrated so far from the capital; but a collection of Jew's-harps and fishing-rods, loaves of sugar and lamp wicks, seemed to banish every suspicion that it was a pharmacy.

Once more at Genoa, I took the good ship Dante to Nice, where a vast influx of strangers has given an impulse to every branch of industry, and which boasts of three of the hand-somest pharmacies in Europe—Pauliau's, Ferrara's, and Mussi's, the latter of which I have the honor to manage.—*London Pharm. Journ. August, 1860.*

PROXIMATE ANALYSIS OF "KAMALA."

By G. LEUBE, JR.

While experimenting with kamala, the author obtained 28.85 per ct. of ashes, which differs so materially from Anderson's results of 3.84 per ct., that the analysis of the latter (*Ph. Journ. and Trans.* xvii. 495) appeared doubtful. Mr. Leube undertook an analysis, the results of which are contained in the following:—

Fifty grms. were displaced with ether; the dry residue weighed 26.850 grms.; on evaporating the red liquid it retained its clearness and left a resin, which was boiled with water. The filtrate from this had a yellowish color and an acid reaction, and contained some sulphate of lime, but no ammonia. Acetate of lead caused a precipitate, and by the subsequent neutralization of the acid liquid with ammonia, a little resin, and the lead salts of citric acid and of a tannic acid, which yielded with sesquichloride of iron a green brown precipitate, were thrown down.

The filtrate from the lead precipitates was treated with carbonate of ammonia, and filtered from the carbonate of lead. The liquid was tested for lactic acid and sugar, with negative results.

The dry resin, after the treatment with water, weighed 22.8 grms.; it appears to contain the active portion of the constituents of kamala. It is soluble in boiling alcohol; about one-fifth separated on cooling, with a somewhat lighter reddish yellow color. Both portions are brittle, soluble in caustic potassa with a red color, and precipitated by acids without alteration; with the aid of some heat they dissolve in ammonia and alkaline carbonates. The readily soluble resin fuses at 80°C . (176°F .), the other at 191°C . (376°F .) They could not be obtained in a crystalline state, are not glucosides, yield with nitric acid oxalic acid, and left .6 and .4 per ct. ashes, respectively. The chemical composition of the first resin is $\text{C}_{30}\text{H}_{18}\text{O}_8$; of the second, $\text{C}_{16}\text{H}_{12}\text{O}_{10}$. The color appears to be peculiar to the resins. Dr. Anderson's rottlerin could not be obtained.

The above residue of 26.850 grms. had the color of hydrated sesquioxide of iron. The alcoholic tincture yielded a small quantity of a brittle resin, soluble in ether and ammonia; no further attention was paid to it. Boiling water extracted from it neither sugar, lactic or citric acid; otherwise the solution showed the same behaviour as the aqueous decoction of the ethereal extract.

25.460 grms. were left after the treatment with alcohol; no albumen or sugar could be detected. After boiling with water, a residue of 23.450 grms. remained behind. The decoction contained a little starch, gum and so-called extractive; it had a brown red color and an insipid taste.

After digesting, with diluted muriatic acid, the dry residue weighed 19.700 grms.; the filtrate contained oxalic acid, sesquioxide of iron and lime.

On treating the residue with potassa, and precipitating the deep brown filtrate with muriatic acid, the precipitate was blackish brown, brittle, of a resinous lustre, and evolved ammonia, along with empyreumatic products when heated in a test-tube; it was a humus-like acid, with some albuminous matter.

The dried residue now weighed 16.340 grms. and yielded

12.5 grms. ashes,—chiefly composed of sand and peroxide of iron.

A fresh portion of kamala left 28.85 per cent. ashes ; composed of KO and NaO .9, MgO .2, CaO 4.1, MnO+Mn₂O₃ .7, Fe₂O₃ 8.5, SiO₃ (soluble) 1.2, SiO₄ (insoluble) 83.8, Cl and SO₂ traces ; = 99.4.

The author recognized sand under the microscope ; but attributes its presence not so much to an adulteration, as to the dust adhering to the kamala during the growth of the plant and the drying of the fruit.—*Wittst. V. Schr.* ix. 321–330.—J. M. M.

ON THE PRESERVATION OF MEDICINAL PREPARATIONS.

By Jno. B.ENZ.

After some introductory remarks upon the frequency with which spoiled drugs and preparations are met, and the necessity for adopting some means to prevent such losses, the author refers to Appert's method of preserving organic substances, and then gives his experience with this mode of preservation as adopted by him a number of years ago, without claiming originality for his suggestions.

1.—*Acidulous Juices and Syrups.*

Most pharmacutists keep too large a stock of syrups. Though some keep very well, others alter their bright color, become turbid and ferment. To preserve the juices, the author uses Appert's method ; the fermented and expressed juices are filled in vials, holding 4 or 5 oz., these are corked and immersed in boiling water for $\frac{1}{4}$ or $\frac{1}{2}$ hour. The neck of each vial is dipped into fused wax so as to cover the whole cork and mouth, after which they are kept in a cool place protected from the light. Succus berberidis, ceras. nigr., ebuli, fragariæ, juniperi, limonis, mororum, myrtillorum, oxycocci, ribium nigr. and rubr., rubi idæi, rubi fruticosi, rhamni cathart., sambuci, and vaccin. vitis idææ, were kept in this manner, and showed no sign of alteration after a period of eight years ; a little pulverulent matter had been separated ; but the fluid possessed its original bright color and was perfectly clear and transparent. If the necessary amount of crystallized cane sugar is added, a clear syrup is obtained

with the aid of heat, which needs no skimming or straining. I never prepare more than 12 or 15 oz. (by weight) of syrup; when used up, another bottle is opened, and so on. The advantage rests in the small quantity of sugar necessary at one time, and in the possibility of preparing the syrup whenever demanded.

With syrups prepared from liquids which are not previously subjected to fermentation, I follow a somewhat different method: I prepare the syrup according to the Pharmacopœia, fill it in 4 oz. vials, and treat the same as in the first instance. Such syrups are *syrupus althææ*, *capillar. vener.*, *cinchonæ*, *mannæ*, *mesebrianth. cryst.*, *papav. alb.*, *rhei*, *rhœados*, *senegæ*, *sennæ c. mann.*, *sennæ*, *rosæ*, *violæ odoratæ*, &c. For syrups prepared with wine, I recommend the same method, though they keep for a longer time than the others. Almond syrup is prepared by me as follows: the sugar is dissolved as well as possible in the cold strained emulsion, the solution is poured with constant agitation into 4 oz. vials, which are afterwards immersed in water of about 50° R. (145 F.) to complete the solution, and then sealed with wax. Thus prepared it may be kept for years.

2.—*Honeys and Inspissated Juices.*

The best method for clarifying honey is Rebling's method with tannin and lime water, to neutralize the free acid, whereby all foreign matter is removed, not a trace of tannin left behind, and the honey rendered perfectly clear. For compound honeys, such as *Mel liquiritiæ*, *rosatum*, *tannatum*, *Mellitum cum succo mercurial. annuæ*, the vegetable fluids are first to be filtered, and a clear honey is obtained, which is to be preserved like the syrups. The same applies likewise to the inspissated juices; when evaporated to a syrupy consistence, they are preserved by Appert's method; *Succus ebuli*, *juniperi*, *sambuci*, *spinæ cerv. inspiss.*, &c., keep thus unaltered.

3.—*Distilled Medicated Waters.*

The medicated waters prepared from the volatile oils, as is well known, are not identical with the distilled waters. Cinnamon water, for instance, when distilled from cinnamon, has a strong odor and a sweet taste; prepared from the oil, it is destitute of sweetness. The waters distilled from German chamomile,

origanum, marjoram, fennel-seed, Levant worm-seed, and cardamom, contain, besides acetic, also butyric and valerianic acids, some others propionic acid; rue-water contains the aldehyd of caprinic acid, and valerian water valerianic acid.

To obviate the rapid decomposition to which the medicated waters are subject, two methods have been proposed: 1. The vegetables are soaked for 24 hours, and then their own weight of water is distilled over, which, on use, is to be sufficiently diluted; 2. The vegetables are merely covered with water, and macerated for a day; for each ounce of distilled water, which they ought to yield by the Pharmacopœia, 5 grains of alcohol are added, and by distillation so many scruples are obtained as ounces are directed by the Pharmacopœia. This essence keeps much better than the distilled water, and any medicated water may be obtained by mixing one scruple of this essence with 23 scruples of water.

Aqua amygd. amar. and aqua laurocerasi are to be kept in black 1 oz. vials sealed with wax; in a similar manner chlorine water is to be kept in black 1 oz. glass stopper vials, in a cool place; it will retain its strength for years, so that 1 oz. will entirely peroxidize 16 grains of protosulphate of iron.

4.—*Extracts.*

Nitrate of potassa, chloride of potassium, and other salts are frequently found crystallized in old aqueous extracts, which, with the constant access of air, are gradually more or less converted into apothegm and humus-like products; the decomposition may be partly prevented by covering their surface with sugar and adding a little alcohol. But such an extract may be compared to a rotten apple, the brown of which increases in size by concentric circles, until the whole of it has been converted into a brown rotten mass. When the aqueous extracts, however, immediately after their preparation, are filled into $\frac{1}{2}$, 1 or 2 oz. wide-mouthed vials, these corked and treated by Appert's method, and lastly sealed, no process of decomposition will ever take place. This treatment is of course unnecessary for dry aqueous extracts.

Hydro-alcoholic extracts generally do not require such a treatment, which is advisable only in such cases where they absorb water from the atmosphere, like extractum belladonnæ,

conii, hyoseyami, and ergotæ. Alcoholic and ethereal extracts likewise do not require this treatment; but it would do no harm and certainly prevent changes, unknown to us, which may take place in the course of years.

5.—*Tinctures.*

Tinct. rhei aquosa, filled in 1 oz. vials and treated by Appert's method, keeps unaltered; carbonate of soda produces a much finer color than carbonate of potassa. The alcoholic tinctures deposit precipitates; sometimes crystals, like tinct. assafœtidæ, castorei and scillæ. Tinct. capsici, after having been exposed to the sunlight (direct?) for eight years, had lost its color and acrimony; while tinct. colchici and colocynth. showed no such change. It is worthy of inquiry how the various liquid medicines will keep, in bottles of different colors, when exposed to diffused and direct sunlight.

6.—*Roots, Barks, Herbs, Flowers, Seeds.*

The advantage of double-cased tin vessels for the preservation of vegetables, is now generally admitted; when entirely dry they keep perfect in these vessels. Mullein flowers, after eight years, still had their golden yellow color; narcotic herbs, after four years, their peculiar odor and green appearance; burdock, colombo, chicory and elecampane, after five years, all their sensible properties, and no insects could be discovered.

Ergot and mustard flour assume, when kept in this manner, a musty odor; but such mustard was just as strong to the taste as before; and ergot, when treated with potassa, evolved a fishy odor not less faint than before. It appears, however, advisable not to keep too large a quantity of these powders on hand.

Vegetables may be kept in glass bottles, when they, in a well dried state, are treated by Appert's method. Violets, roses, primroses and many others are thus preserved in an excellent state.

By the experience of the pharmacist, Liebig's assertions are proved, namely: "That the tendency of organic matter in contact with air to pass into fermentation and decay, and in consequence thereof to start fermentation and decay in others, is suspended without exception by the temperature of boiling water; that if the first and sole cause of these changes—

oxygen—is now excluded, the vegetables must preserve their qualities for an unlimited time; that matter alone possesses no power of mobility, and that no atom alters its properties or changes its place save by an external influence.”—*Wittstein's V. Schr.* ix. 340–349.—J. M. M.

ETHER AS A REMEDY FOR DEAFNESS.

The attention of the public, both medical and non-medical, has been of late attracted by a fact which, though in its origin and early phases going back some years, is of interest through the publicity given to it by the official journal of the University of Paris, as well as through the daily press.

To state the question briefly :—About the month of August, 1855, a certain Mademoiselle Cléret, a private governess, inhabiting a populous part of Paris, applied to the Minister of Public Instruction for assistance, basing her application, among other grounds, upon her knowledge of a method of causing the deaf and dumb to hear. This method, the discovery of which was accidental, and of which she had made a successful trial upon some pupils suffering from deafness, after having experienced its efficacy in her own person, consists in the use of sulphuric ether dropped directly into the external auditory canal at the rate of four, five, six, or eight drops per day. After the application of the remedy for fifteen or twenty days, its use may be suspended some days, and then renewed; it may be continued, if not indefinitely, at least for a very lengthened period.

A commission appointed by the Minister, and of which the medical element included M. Lélut as president, M. Béhier as secretary, and the late M. Bérard, was deputed to examine into the state of the children submitted to it by Mademoiselle Cléret. The commission pursued its investigation with the utmost diligence, until upon a sudden the lady was seized with a fearful malady. After having waited, without much hope, an improvement in the mental condition of Mademoiselle Cléret, the commission drew up its report, although the question, necessarily suspended, did not appear susceptible of being brought to a definite conclusion, or to a complete and demonstrative result. It considered, however, that it was its duty to make known such facts as it had witnessed; this it did in the following terms :—

Twenty-nine children have been treated by this lady; all with beneficial results. Two of those brought by her before the commission, and who had been treated by her previously, were completely cured. Seven children have been submitted to the commission previous to any trials being made upon them, and their absolute deafness and dumbness demonstrated by Mademoiselle Cléret; and in all cases, but especially in four, a manifest change has been perceptible after eight or nine months of treatment, and the patients have been able to recognize with great ease various sounds. The reporter to the commission has been careful to add that the most minute precautions were taken to avoid sources of error, and to guard against any illusion that might arise from perception derived through another sense than that of hearing.

The commission, wishing to test the means used by Mademoiselle Cléret upon other cases than those exclusively under her own care, deputed one of their number to carry out her plan of treatment upon other patients. Twenty persons were accordingly entrusted to him; most of them were deaf-mute children, but there were also some old men whose hearing was impaired—in some cases upon one side only. In all these a very noticeable effect was produced. It was also found that patients whose sense of hearing had become impaired through typhoid fever were very speedily restored by the same treatment.

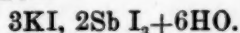
In conclusion, the commission state that with the exception of two or three children whose deafness and dumbness was attested by authentic certificates, and who now hear well, it has determined nothing but the incomplete results of experiments commenced, but not terminated, manifest improvement, but nothing more definite.—*Lond. Pharm. Jour. Aug. 1860, from Gazette des Hopitaux, 8th May, 1860.*

DOUBLE SALTS OF IODIDE OF ANTIMONY.

The iodide of antimony forms beautiful double salts with the iodides of the alkaline metals, several of which are described by Schæffer. He obtains them by adding the iodide of antimony in fine powder to hot saturated solutions of the other iodides, and then slowly evaporating the solution at the ordinary tem-

perature. He generally used three equivalents of the alkaline iodide to one equivalent of the iodide of antimony, and in contradiction to Nicklès asserts that the latter is never decomposed.

Iodide of Antimony and Potassium forms quadrangular plates with angles frequently truncated. They appear blackish brown by reflected, and red by transmitted, light. By heating to 100° for some time they lose all their water and are then of a beautiful vermilion color. The composition of the salt answers to the formula:—



Iodide of Antimony and Sodium forms rectangular prisms of an orange yellow color. Anhydrous the salt is orange. Formula: $3\text{NaI}, 2\text{SbI}_3 + 24\text{HO}.$

Iodide of Antimony and Ammonium. A hot saturated solution of one equivalent of iodide of antimony and three equivalents of hydriodate of ammonia deposits successively three different salts: the first $3\text{NH}_4\text{I}, 4\text{SbI}_3 + 18\text{HO}$ forms rectangular prisms of a scarlet red color. When dried it becomes crimson red. The second $3\text{NH}_4\text{I}, 2\text{SbI}_3 + 6\text{HO}$ a good deal resembles the potash salt described above. The third, $4\text{NH}_4\text{I}, \text{SbI}_3 + 6\text{HO}$ presents itself in large rectangular prisms with pointed edges, almost black, but ruby red when seen by transmitted light through the thin parts: when dried it becomes of a carmine color.

Iodide of Antimony and Barium. Translucid rhomboidal prisms of a deep orange color, and of a glassy lustre. Formula: $2\text{BaI}, \text{SbI}_3 + 18\text{HO}.$

Water decomposes all the above salts with the deposit of the basic iodide of antimony. Hydrochloric, acetic, and tartaric acids dissolved them. Sulphide of carbon removes the iodide of antimony from them. Heat decomposes those with a fixed iodide base, giving a sublimate of iodide of antimony; the ammoniacal salts sublimate with partial decomposition.—*Chemical News, London, Sept. 1, 1860, from Pogg. Annal. der Phys. u. Chem. Bd. cix. s. 611.*

ANALYSIS OF BEEF MARROW.

By DR. C. EYLERTS.

Until now, we possess only two investigations of the marrow fat of the ox. The older is by Berzelius, (*Gehlen's Journ.*

1806, ii.) and treats chiefly of its general properties; Jahn (Chem. Tab. 1814) merely gives a short note, that it was apparently composed of two fats,—one of which was liquid, and could be separated from the solid by filtration. According to Berzelius, ox marrow fuses at 45° C., is saponifiable by alkalies, slightly soluble in boiling alcohol, separating on cooling as a white flocculent powder, and, with difficulty, soluble in ether; he likewise subjected it to dry distillation, and to the action of sulphuric and nitric acids.

Dr. Eylerts prepared the pure fat from the marrow, which was of a yellowish white color, inodorous, of a mild taste, and, after four months, showed no disposition to rancidity. It was drawn into a capillary tube, having some air between the several drops, and fused then at 45.5° C. (113.9° F.), and congealed at 35° C. (95° F.) It is soluble at 12° C. in 42 p. ether of .730 sp. gr. in 2420 p. alcohol of 90 per ct., and in 40 p. oil of turpentine. Boiling ether and oil of turpentine dissolve nearly their own weight, boiling alcohol 1-150th.

In order to determine the fatty acids, the marrow fat was saponified with potassa and the soap decomposed with diluted sulphuric acid. The mother liquor contained no volatile acid; but yielded, by evaporation and treating with alcohol, almost 4 per ct. of syrupy sweet glycerine.

The fatty acids were fused with water and combined with potassa; the soap was decomposed by chloride of sodium, and the amount of magnesia determined necessary for the complete precipitation. One hundred and twenty grs. of soda soap yielded 234 grs. (?) of magnesia soap, which contained 5.85 grs. of magnesia.

Six oz. of the soap was now dissolved in 60 oz. of 86 per ct. alcohol and precipitated with one-fourth the requisite quantity of acetate of magnesia dissolved in alcohol; this fractional precipitation was repeated twice after the separation of the precipitate.

Each of the precipitates was fused with dilute hydrochloric acid until all the magnesia had been removed; the fat was freed from the acid, and dissolved in hot alcohol, from which a portion separated, after cooling, in loose crystalline laminæ. This crystalline precipitate was repeatedly treated with hot alcohol

until the fusing point was stationary; it now fused at 72.5°C . (162.5°F .), and congealed at 67°C . (152°F .) Ultimate analysis proved it to have the composition $\text{C}_{42}\text{H}_{42}\text{O}_4$. The author named it *Medullic Acid*. Voelcker's acid from the behenoil (from the *Moringa oleifera*), for which he gives the same composition, fuses at 76°C ., and Strecker has already remarked that the analyses agree better with the formula $\text{C}_{44}\text{H}_{44}\text{O}_4$, which is rendered probable by the fusing point of the medullic acid.

From the mother liquors obtained from the re-crystallization of the medullic acid $\frac{1}{3}$ of the alcohol was distilled off. The crystalline mass was repeatedly crystallized from alcohol, and fused then at 62°C . (143.6°F .) and then congealed at 55.5°C . (131.9°F .); it was *palmitic acid*. The mother liquors yielded a small portion of a mixture of palmitic and oleic acid, fusing at 38°C .

The filtrate from the third precipitate with acetate of magnesia was mixed with the remaining fourth of the alcoholic solution of this salt, and evaporated with the addition of water. The magnesia soap was decomposed by hydrochloric acid, the fatty acid combined with potassa, the soap decomposed by chloride of sodium, and the resulting soda soap precipitated by acetate of lead. Ether dissolved from it $87\frac{1}{2}$ per ct. and 5.875 grs. of this soluble portion left on incineration 1.710 and 1.720 grs. PbO ; the formula PbO , $\text{C}_{36}\text{H}_{33}\text{O}_3$, requires 1.7047 grs. The acid of this soap is therefore *oleic acid*.

No stearic acid was found.

The approximate proportion of the three acids in ox marrow is: palmitic 46, medullic 10, and oleic acid 44 per ct.—*Inaugural Dissertation, Wittstein's V. Leh.* ix. 330–340.—J. M. M.

ON A PURE NATURAL WATER.

By B. M. BRACKENRIDGE, of Tarentum, Allegheny County, Pa.

Spring water usually contains a larger or smaller amount of gaseous and saline bodies in solution; rain water is generally supposed to approach nearest to distilled water. The author, however, gives notice of an exception to this rule, and Dr. Ewd. Stieren, who has been using the water since 1852, confirms his statement.

The spring in question appears on the highest point of a narrow ravine, known as "The Dark Hollow," in the hills forming the boundary of Allegheny county. A layer of kies and sand, from 50 to 60 feet in height, rests upon slate rock, which is impenetrable for water. The water filters through the kies and sand, and rushes from between the rock and the sandy stratum in a constant stream,—collecting in a small basin, and falls over the slate rock about 25 feet into another basin.

After heavy rains the spring water contains a trace of carbonic acid, which, however, is lost in falling over the precipice, and the water below the falls is always chemically pure. Blue and red litmus paper is not altered by it; nitrate of silver and chloride of barium occasion no turbidity; and the vapors of the water, when conducted into a solution of nitrate of baryta, rendered alkaline by ammonia, do not disturb the same; boiled with solution of indigo, no discolorization takes place; five gallons of it, when evaporated, left no solid residue.

In answer to the lecture of a Mr. Clemson, before the Smithsonian Institution, in Washington, D. C., which was published in the *National Intelligencer*, the author wrote a paper, to which Mr. Clemson replied, that it could not be chemically pure; but must contain oxygen from the atmosphere. But, inasmuch as the author did not state the spring to be a hot one, and as cold distilled water absorbs air when left in contact with it, the author has proved it to be as pure as cold distilled water. All his reagents are dissolved in this water, and he never observed any alteration in these solutions.—*Wittstein's V. Lehr.* ix. 370-373.—J. M. M.

Varieties.

Pennsylvania Rock Oil.—In most countries, a troublesome process must be undergone to extract oil from mineral substances, such as from coal and asphalt; but Pennsylvania seems to be so favorably dealt with by Dame Nature that the very rocks distil oil into her lap. The north-western part of that State seems to contain a number of subterranean springs which yield a limpid oil, some of which we have examined. It appears that the Pennsylvania Rock Oil Company purchased the spring of Brewer, William & Co., for the sum of 5000 dollars; and, in 1858, leased it to Mr. E. L.

Drake, with the understanding that he should gather the oil at his own expense and pay them 12½ cents a gallon for it. His lease extended for 15 years, with full privilege of working it at his own option. In May last, he commenced looking for salt, and after sinking a shaft 71 feet, on the first of last month, he struck a fissure through which he was boring, and the discovery of the subterranean spring of oil was the result. The yield per day, up to the period of the recent fire, had increased from 400 to 1600 gallons. The tract of land on which this spring is located was once purchased for a cow, and previously it had been sold at the treasurer's sale for taxes. Now, it is believed, 100,000 dollars would not purchase one acre of it.

The substance known here as Seneca oil, exudes from the rocks, or floats on the surface of springs, in various parts of the world. The name of Seneca oil was derived from the Seneca Indians, a tribe famous in the confederacy known as the Six Nations. The oil in this county was discovered and used by this tribe. A similar oil is found in abundance at Amiano, in Italy; Birmah, on the borders of the Caspian Sea; on the West India Islands; along the shore of the Kanawha, Virginia; in Kentucky; near Seneca Lake, New York; in western Pennsylvania, generally; and in great abundance in Venango county. The wells of Birmah yield 400,000 hogsheads annually. Its uses are almost endless. As a medicine, it is used both externally and internally; is regarded as an excellent stimulating embrocation in chilblains, chronic rheumatism, affections of the joints, paralysis, and kindred complaints. It is an ingredient in the celebrated British oil. It is also used for making an excellent lamp oil, known as Carbon oil, and is considered among machinists as the best lubricator extant.—*Chem. News*, Jan. 28, 1860, from *Scientific American*.

Autumn on the Thames.—No gardens of ancient or modern times can compare with the Royal Botanic Gardens at Kew for the innumerable variety and number of foreign plants, rare and majestic native trees and exotic ferns, thriving in health and marvellous beauty within its ample domain. To the young artist and artificial florist desirous of making progress in their calling, the months of September and October offer a favorable opportunity for the study of foliage in all its endless variety of form, size, and hue; the lover of nature, too, in one of her most beautiful aspects, and the admirer of gorgeous coloring, may also, at this season of the year, enjoy a treat of the very highest order, as the old and new arboretums, the pinetum, and many of the conservatories are brilliant with a thousand exquisite tints, the whole forming a series of sylvan pictures, rich with excess of beauty, forcibly reminding visitors of the departing glories of ancient Sherwood and the grandeur and magnificence of American primeval forest scenery during the fall of the leaf, or Indian summer, of that vast continent. Standing on the western terrace of the great tropical Palm-house, gilded by the setting sunbeams of a fine autumnal cloudless sky, the matchless view, embracing the whole of the extensive

amphitheatre, inclosing the new arboretum with its floral temples, groups of patriarchal elms, lofty pines, stately oaks, spreading cedars, woodland glades, and noble avenues, bounded by the calm, flowing river, which seen at high water from an eminence (Victoria Mount,) has the appearance of an extensive serpentine lake—the stream, reflecting the bright azure of the lovely sky, realizes the idea of a splendid sheet of lapis lazuli, or an immense turquoise, enwreathed with emeralds, variegated with the most costly gems—is beautiful and picturesque almost beyond the power of language to depict; no written description can convey to the reader its enchanting loveliness and surpassing beauty; the prospect, from its magnitude, loneliness and solitude, approaches sublimity—it must be seen to be enjoyed and appreciated. This glorious and perfect panorama is universally allowed by competent judges to be unrivalled as a specimen of English landscape gardening and river scenery throughout the world.—*Athenæum*.

Preparation of Carbonic Acid.—Messrs. Meschelyneck and Lionnet have devised a means of preparing large quantities of carbonic acid from carbonate of lime, at a comparatively nominal cost. The operation consists in passing the vapor of water over carbonate of lime. It is well known that chalk undergoes decomposition at a moderately high temperature, and that the change is much promoted by the presence of steam; but the authors indicate that if the chalk be subjected at 100° to a current of steam, the whole of the carbonic acid is disengaged with sufficient rapidity to render the process a convenient one for use upon the large scale.

The authors recommend the following mode of operating:—Refractory earthen retorts, filled with chalk, are heated to dull redness in a reverberatory furnace. Currents of steam are then passed through the retorts, when large quantities of carbonic acid are immediately evolved.—*Lond. Pharm. Journ.* Oct. 1860.

Detection of the Adulteration of Citric with Tartaric Acid.—The similitude of the physical characters of those acids, when the crystals are bruised, permits of this adulteration in commerce. It is easily detected by pouring over a horizontal glass plate a thin layer of a slightly saturated solution of caustic potass, and then projecting on this a portion of the mixture of doubtful crystals. In a few seconds the tartaric acid crystals whiten, become opaque, being covered with microscopical crystals of bitartrate of potassa. The citric acid crystals continue diaphanous, being partly dissolved in the alkaline solution. The relative quantities of the two acids may thus be easily appreciated. The same means may be applied to a powder formed by exactly mixing the two acids. The object-glass of a microscope being wetted with the solution is then powdered with some of the suspected substance. A crowd of minute acicular crystals is produced from the tartaric acid, while the diaphanous citric acid disappears in the solution.—*London Pharm. Journ.* from *Bulletin de Therap.*

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Lewis Levy, thesis on *Juglans Cinerea*.

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Many papers, strictly scientific, or intimately connected with the welfare of the pharmacist, were read, and testified to an increasing interest in the Association. Some important questions, such as the legal restrictions on the sale of poisons, the proposed change in weights and measures in the next edition of our national Pharmacopœia, the closing of drug stores during a part of every Sunday, &c., elicited spirited discussions. Among the specimens on exhibition, many apparatus and chemical and pharmaceutical preparations were of Philadelphia manufacture.

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We would further remark, that the druggists and pharmacutists of

New York gave a splendid dinner to the members of the American Pharmaceutical Association and a number of invited guests.

As a matter of particular interest, we may notice the invitation extended by Dr. E. R. Squibb to visit his laboratory. Many members availed themselves of this opportunity, and were gratified by the examination of the many improvements adopted by our enterprising fellow-member.

The next meeting of the American Pharmaceutical Association will be held in St. Louis, Mo., on the fourth Wednesday of August, 1861. A committee has been appointed with the view of organizing an excursion party from the Eastern and Northern States, and of securing a large attendance of the Pharmacutists and druggists of the South, the West, and the Southwest, at the Tenth Annual Meeting.

Signed, JNO. M. MAISCH,
CHARLES SHIVERS,
WM. R. WARNER,
JAMES T. SHINN,
GEO. J. SCATTERGOOD,

Delegates."

The following Report was read by J. M. Maisch, Chairman of the Committee from which it emanated :

"The Committee on the collection of Plants, appointed at the Annual Meeting in March, respectfully beg leave to submit the following report :

From the beginning of April to the end of August, we have devoted at least one, sometimes two or three, afternoons every week to the gathering of plants, which were dried in the usual manner. By spending so much time for carrying out the purposes for which the Committee had been appointed, and by directing our excursions to various parts of the country surrounding us, we have been enabled to make quite an extensive collection of the plants growing in our neighborhood. We have not found the time yet to systematically arrange these, and are, for this reason, unable to lay a complete list before the College. We intend to continue our excursions until the close of the season.

The object of appointing this Committee was, with the view of meeting the proposed exchanges with the Swiss Apothecaries' Association, to effect which, however, no authority was granted them. The Committee would, therefore, respectfully ask for the authority to send to and receive plants from Dr. Flückiger, the President of the Swiss Association, in the name of the Philadelphia College of Pharmacy.

The Committee have examined the Herbarium of the College, and offer the following remarks :

There are now two collections, besides some loose specimens, stored away in the closets of the College. Both contain but few cryptogamous plants, and for neither of them has a catalogue been made out. From a hasty examination of one, we found that, although it was arranged somewhat in natural orders, it embraced many plants not yet analyzed. The Committee have as yet done very little with it.

The other collection is, on the whole, in an excellent condition, all the plants having been analyzed, with few exceptions, and arranged systematically into orders, sub-orders and genera. We concluded to write out a full catalogue, which is now upon the table, and subsequently to arrange into this herbarium the plants of the other and of our own collection.

In attending to this assumed duty, we observed that a large number of the plants were of foreign growth; from England, France, Spain, Italy, Switzerland, Germany, Russia, Turkey, Greece, Egypt, Asia Minor, the Caucasus, Persia, China, &c., and that most of them had been well dried and preserved. There is a deficiency in good specimens of American plants, though many genera have evidently received much attention; and plants indigenous to the South and to the West have been procured.

In this collection the College possess a very good foundation for a first-class herbarium, and it appears to your Committee to be a duty of the College to improve it as much as possible, so as to impart a stimulus to the important science of Botany, which is still too much neglected by our pharmacentists generally.

Considering these facts, the Committee venture on the following propositions:

1. We propose to create a standing Committee on Botany, whose duties shall be to collect plants, keep the herbarium in order, and place it in a condition which will admit of its being used in lectures on botany, materia medica, pharmacy, &c.; to effect exchanges, and enter into correspondence with individuals, societies and colleges, of our own and of foreign countries.

This committee should consist of not less than five members, who are willing to devote, faithfully, a portion of their leisure hours to its purposes.

2. We propose that a good microscope be procured, either out of the funds of the College or by private subscription.

The College is probably in need of such an instrument for other purposes; this Committee have sadly felt the need of it. Acotyledonous plants, umbelliferæ, cruciferæ, compositæ, graminæ, juncaceæ, &c., had to be more or less neglected this year, the magnifying glasses in possession of your Committee being insufficient, in many instances, to recognize minute distinguishing characteristics.

3. We propose that some new works on the botany of the United States and some foreign countries be procured.

In analyzing plants, it is indispensable to compare the views of different authors, likewise to consult authorities of foreign countries with a climate similar to our own. We consider the botanical works of our library not sufficient for the purpose of a committee on botany.

4. We propose to have a good specimen of every species and its varieties mounted on paper, systematically arranged and kept, so as to be always ready for examination.

Our idea is to have the whole herbarium preserved in a similar manner to the specimens presented by Professor Thomas, and to keep them in cases like those upon the table. When put up in this manner, the plants will be less liable to injury, their value for the purposes of the College will be greatly enhanced, and the herbarium assume its proper importance among the other valuable collections of the College. Sections of different organs, where they are important, and notes on the habitat, the time of flowering, the synonyms in Latin and English, and, probably, in other modern languages; the names of plants which are used as adulterations, or with which they might be confounded; this, and probably other information might be added, whereby the usefulness of the collection would be increased manyfold.

We are aware that this work would be an undertaking occupying many years to come; but we sincerely believe that it will result in a vast benefit to our institution.

To aid the Professors in their lectures on the various branches taught in the College, we are of the opinion that a separate collection ought to be made of such plants as have been, or are at present, officinal in our Pharmacopœia, or products of which are employed in medicine; and we, therefore,

5. Propose, that a *collectio plantarum officinarum* be prepared by the Committee on Botany, the plants to be mounted in a similar manner as before indicated.

All of which is respectfully submitted.

JNO. M. MAISCH, *Chairman.*

WM. R. WARNER,

On behalf of the Committee.

Philadelphia, Sept. 24th, 1860."

The reading of this report called forth a general expression of satisfaction with the zeal and efficiency of this Committee; on motion, it was accepted, and the Committee continued for the next six months. Professor Procter was released from the service at his own request.

On motion, it was resolved that the Committee be authorized to enter into the correspondence and make the exchanges mentioned in their report.

On motion, it was resolved, That the Board of Trustees are instructed to procure a microscope, as suggested by the Committee, and to aid them in carrying out the proposals of the Report as far as practicable.

The following proposal for a new law of the College was submitted by James T. Shinn and A. B. Taylor, and on motion directed to lie on the table till the next meeting, as required by the laws:

"Law X. of the Herbarium.—A standing committee of five shall be appointed by the College at the meeting in September, to keep the Herbarium in order, to collect plants, to place them in condition to be used in lectures on Botany, Materia Medica, Pharmacy, &c.; to effect ex-

changes, and to enter into correspondence with individuals, societies and colleges, of our own and foreign countries."

The Corresponding Secretary, in reply to a letter addressed to the Swiss Apothecaries' Association, by order of the Board of Trustees, introduced the following letter received by him in reply, which was directed to be noted on the Minutes:

Der Schweizerische Apothekerverein, BERNE, Sept. 1st, 1860.

To Mr. William Procter, Jr.,

Corresponding Secretary of the Philadelphia College of Pharmacy.

DEAR SIR: I have well received the letter which you addressed on Feb. 26th, past, to Mr. Ringk, our Vice President, and return you the best thanks for your kind offers.

As to the specimens desired, we only understand such plants growing in the territory of the United States—both spontaneous and cultivated—being actually or formerly of any use in medicine, industry, or furnishing any interesting goods for trade or kitchen; also, plants distinguished by poisonous qualities. Drugs of this order, furnished by these plants, or others, should be added if possible. Botanical and other scientific and practical notices on the specimens sent, would be very agreeable. Plants notoriously immigrated from Europe are to be excluded, unless they present some interesting particularities (degeneration). We shall be very glad, if it be possible to join, perhaps, some specimens from other parts of America, especially from Mexico, the West Indies, or the northern parts of South and Central America.

I scarcely need to call by name the plants I understand by the above definition; it may be sufficient to point out, for instance:—

Quercus tinctoria, Michaux; *Abies balsamea*, D. C.; *Abies canadensis*, Link; *Pinus palustris*, Aiton; *P. Tæda*, L.; *Sassafras offic.*; *Monarda didyma*, *Monarda fistulosa*, and other *Monardas*; *Adiantum pedatum*, L. (*Ad. patens*, Wild.); *Spigelia marilandica*, L.; *Smilax China*, L.; *Lobelia inflata*, L. *syphilitica*, (root); *Polygala Senega*; *Aristolochia serpentaria*; *Diervilla canadensis*; *Gaultheria procumbens*; *Tillandsia usneoides*; *Che-nopodium ambrosioides*; *Carya (Juglans) olivæformis* (Hickory); *Mentha piperita* and others; *Saccharum*; *Gossypium*; *Nicotiana*.

From the plants of foreign countries I only name, for instance:

Maranta, *Croton Eleuteria*, *Cinchona*, *Geoffroya Surinamensis*, *Picræna* (quassia) *amara* and *excelsa*, *Quassia Simaruba*, *Erythroxylon Coca*, *Paullinia sorbilis*, *Hæmatoxylon*, *Smilax medica*, *Smilax officinalis* and others; *Convolvulus Purga* and *C. Orizabensis*, *Cephaelis Ipecacuanha*, *Convolvulus Mechoacana*, *Hymenæa*, *Pterocarpus Draco*, *Hibiscus Abelmoschus*, *Myrtus Pimenta*, *Anacardium occidentale*, *Veratrum Sabadilla*, (*Sabadilla* off. Brandt.) *Guaiacum*, &c. Merchandizes generally known (*Sassafras*, rad. *Senegæ*, *Ipecacuanha*, *Jalapa*, lig. *Guaiac*.) may not be sent.

I think, finally, it would be very well to present me a list of specimens which you are able to send, before taking the trouble of composing really the collection, in order to simplify the choice, and to avoid useless care.

The collection may be sent to the Smithsonian Institution, Washington, to be directed to Mr. Flugel, Consul of the U. S. at Leipzig, together with the books which the Smithsonian Institution presents from time to time to the Swiss Association of Natural Sciences.

I am ready, for my part, to send you any Swiss plants, medical or others, which you will make known, or drugs, minerals, &c.

I beg you to present to the next meeting of the American Pharmaceutical Association the best thanks of their Swiss colleagues, who receive with great pleasure your communications. Best regards, also, to Mr. Maisch.

With the assurance of true respect,

I am, truly yours,

FLÜKIGER, Dr.,

President of the Apothecaries' Association of Switzerland, Apothecary of the State of Berne.

The Committee on Latin Labels informed the College that they have in press a new and greatly extended book of specimen labels, including the names of articles of *Materia Medica*, Pharmaceutical preparations, and chemicals used in analysis and for illustration, the whole being intended for use in cabinets of specimens.

The Semi-Annual election for eight members of the Board of Trustees was held, and resulted as follows :

Thomas P. James,	Jacob L. Smith,	Wm. J. Jenks,
A. B. Taylor,	C. Bullock,	Evan T. Ellis,
Dr. W. H. Pile,	James T. Shinn.	

To fill a vacancy occurring through inadvertence at the last election, John M. Maisch.

The following were elected the Committee on Deceased Members :

Edward Parrish,	W. Procter, Jr.,	C. Bullock.
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Then adjourned.

EDWARD PARRISH, *Secretary*.

Editorial Department.

MEETING OF THE AMERICAN PHARMACEUTICAL ASSOCIATION.—At the appointed time, the convention of this now large body met at the University buildings, in New York, and transacted the various business which pertains to its mission in the cause of Pharmacy. The Minutes of the Meeting, which we publish in the beginning of this number, will show what that business was in detail. Harmony continued throughout, and not the slightest ripple of ill feeling was manifested in any of the discussions, a result not always to be claimed by such meetings. About eighty new members joined the Association at this meeting, which now swells the aggregate number to five hundred and thirty five. Besides the reading of scientific papers and reports, the subjects of the sale of poisons, of weights and measures, and of the adulteration of alcoholic liquors, were discussed at some length. The discussion on weights and measures was unfortunately left till the last day, when very many of the members had left for their homes. As it was, the expression was entirely against the adoption of the plan proposed for the British Pharmacopœia, which is to abandon Troy weight in toto, and divide the avoirdupois ounce into the apothecary's weight divisions, making a new grain the 480th part of 437.5 grains. The adoption of the resolution of Dr. Squibb, to use the term *parts* in lieu of weights—meaning parts by weight—we consider as highly objectionable for the Pharmacopœia, involving a mental process on every occasion, which, in the hands of the unskilled, will be constantly liable to lead to error and confusion. It suits the chemical laboratory very well, where the variations in quantities operated on is constant with the demand.

In its literary and scientific results, we believe that the New York meeting falls behind those of Washington and Boston, a result partly owing to there being few important special committees; but mainly to the large proportion of failures to answer the queries accepted last year. As this labor is entirely gratuitous, it is liable to great irregularity in its performance; and, whilst regretting the falling off in this particular at this meeting, we may hope for a more abundant harvest at St. Louis next year.

Notwithstanding the deprecatory resolution of last year, our New York friends could not see the propriety of denying themselves the indulgence of a gastronomic display, and in accordance with the liberal way in which such things are done in "the metropolis," the dinner given by "the Druggists and Pharmaceutists of New York," to the members of the American Pharmaceutical Association, is said to have been the most extensive and

costly affair of the kind that has yet attended the progress of our Body. Although an invited guest, we were not present, being, as our friends know, opposed to such demonstrations, and, therefore, better absent. It is a thoroughly Anglo-Saxon custom—that of eating and drinking an association into popularity and notoriety—and we see but little hope of any change in a custom that seems as natural to the Anglo-American, as if an indigenous production. But whilst bearing testimony against this speciality, we are not disposed to find fault with those who see in these occasions opportunities for the culture of friendly and business relations, and the initiation of friendships which bear good fruits; it is more the manner than the thing—the accompaniments than the thing itself; and when stripped of vinic demonstrations and alcoholic effusions, “annual dinners,” if kept within the bounds of moderation, with less show and more substance, may really be the means of promoting friendship and good fellowship among the members; and to prove that we harbor no ill feeling against our New York friends, we give below the introductory speech of our worthy ex-president, John Meakim, who was chairman on the occasion.

Gentlemen of the American Pharmaceutical Association:

The character of his studies and the nature of his duties, have a great tendency to seclude the Pharmaceutist from the social festivities of his fellow-men; and such is the effect of habit upon the mind, that his becomes imbued, almost, with the idea of a positive necessity for such seclusion. Growing out of this state of feeling, a portion of our respected associates are averse to any allotment of time for the social discussion of subjects not directly identified with Pharmacy. But surely one evening of the year is not too prodigal an allotment, in which we may cast aside the daily thoughts and cares of our vocation to meet our brethren at the social board for an interchange of kindly sentiments. And what more fitting season than this, when the votaries to Pharmacy assemble from the snow-capped north and the sunny south, from the thriving east and the fertile west, with their annual gatherings of useful thoughts and facts, as contributions to the store of knowledge in our Association, and which tend to bind us and our glorious Union to a common cause. For, truly, as Pharmaceutists, we have no division between North and South. However, gentlemen, entertaining a high regard for respected minorities, we have endeavored that our social intercourse on this occasion shall partake of a spirit of investigation, and with that view we would invite your attention to an examination into the science of Gastronomy; in its relations to the Hygienic art, with which that of Pharmacy is so closely connected. The culture of the grape, and the production of native wines, are also eliciting a general interest; and are, especially appropriate for your earnest and serious consideration at this time. We submit for comparison, samples of foreign and native, said to be strictly pure and for medicinal use only. And it is our hope, gentlemen, to use the language of an early and zealous friend of the Association, “that each will prove to be good of its kind;” and also that when we come to a final vote on them we shall be able to rise to a man in the affirmative.

With these views, fellow-members and honored guests, we have invited you to partake with us of this social repast. I am proud, as the vocal

organ of my colleagues, the Druggists and Pharmacentists of New York, to bid you welcome, and to assure you of our desire to make this an hour of pleasure and of profit to you. Accept, then, gentlemen, our thanks for the honor of your presence.

I will not refer to the growth of our Association, and its increasing usefulness; these are better attested by the presence of its members, and by the value of their contributions, than by any language of mine; and I have the less regret for this deficiency on my part, as I feel assured that ample recompense will be made by an associate, who will respond to the first sentiment of the evening.

The President then read as the first toast:—

The American Pharmaceutical Association—its migrations and gathering forces—from the sturdy North to the genial South—from the historical East to the young and glorious West—from Mount Vernon to Bunker Hill, and thence back to the point of beginning. May the vigor of its past course be the earnest of its future.

The toast was responded to by Dr. Guthrie, who gave a succinct history of the origin of the Association, a theme grateful to him as one of the chief actors at its inception.

OUR JOURNAL.—The present number, which completes the thirty-second volume of this Journal, (which has been issued without intermission during as many years,) has been delayed beyond the usual time of issue, by the Index and the additional duties of the Editor, in connection with the Proceedings of the Association, which, it is hoped, will be accepted as a sufficient apology for our lack of punctuality. In the next volume we propose to publish, in parts, a translation of the work of Dr. Rochleder, on the proximate analysis of organic substances, with notes by Mr. John M. Maisch, and which will prove a useful work of reference and study to our young pharmaceutical chemists, who wish to prosecute organic research in a regularly scientific manner.

IS CITRIC ACID A POISON?—Some of our readers have taken exception to the paper of Dr. J. Lawrence Smith, published in our last number, on Tartro-Citric Lemonade, from the employment of what is believed to be a species of sophistry, which tends to discredit a well-tried and valuable preparation. As we have been reflected upon for not pointing out this false argument at the time of publishing the paper, (which we really had intended to do in a foot note, but forgot it at the right moment,) we do so now. The sophistry consists in throwing the onus, which appertains only to a concentrated solution of citric acid as a corrosive gastric irritant, on solution of citrate of magnesia, because sometimes this solution has quite an excess of acid present, and thus causing the unwary reader to infer, because Bence Jones found citric acid *per se*, poisonous to rabbits, etc., *ergo* citric acid is poisonous to man—consequently citrate of magnesia must be objectionable;—and this, in despite the facts that the medical journals have been recommending rheumatic patients to be drenched with lemon-juice by the half pint, and that lemonade is universally considered a healthful beverage.

SUNDAY CLOSING MOVEMENT.—Since our last issue, the Apothecaries of Philadelphia met at the Hall of the College of Pharmacy, and decided on adopting a new arrangement of the time of closing stores on Sunday, so as to meet the wants of the public better than that first tried. The following communication will show the present arrangement:

The Sunday Movement among the Apothecaries.

It is well known that a movement was inaugurated last summer with a view to securing to the Proprietors and Assistants of Drug Stores, a suitable period of recreation on the Sabbath. A paper was circulated for signatures among the druggists, pledging the signers to conform to such hours as might be agreed upon at a meeting to be held agreeably to notice. The signatures of a large majority of the Pharmacutists and retail Druggists being obtained, a meeting was held, and, after full discussion, certain hours for opening and closing were fixed upon, an address was issued to Physicians and the public, and the arrangement fairly put to the test. From the first it became apparent that some of those who had subscribed to the paper, and then pledged themselves to the scheme, had no serious intention of changing their customary business arrangements on Sunday; these being among the most conspicuous Pharmacutists of the city, weakened the resolution of others; added to this defection, was the fact which soon became apparent, that the hours fixed by the meeting were ill-advised, and constituted too radical a change from the long established custom. A meeting was therefore held on the 22nd of August last, at which it was resolved to canvass the whole city, except the three rural wards, and ascertain clearly the sentiment of the entire body of retail Druggists.

Accordingly, 238 were called on, of whom 187 were willing to conform to the following hours: *To open the stores on Sunday, except from 1 to 6 o'clock in the afternoon, during which hours, and the latter part of the evening, they would close, and feel at liberty to absent themselves; 51 announce themselves as unwilling to conform to the arrangement.* After a full discussion, it was at a subsequent meeting unanimously resolved to adopt the said arrangement. Committees were appointed to have it fully announced, and to correspond also with the medical organizations in regard to it.

By order of the Committee.

We believe this plan to be practicable, after physicians and the people get accustomed to it and use a little forethought, providing needful medicines in the forepart of the day.

AMERICAN PHARMACEUTICAL ASSOCIATION.—The attention of the members of this Body is invited to the following notice of its Executive Committee:

NOTICE.

To the Members of the American Pharmaceutical Association.

All those members who reside out of the cities of Boston, New York, Philadelphia, Baltimore, Cincinnati and St. Louis, who are entitled to the volume of Proceedings, by having paid their annual contribution, will please to enclose a printed card or clearly written address to the undersigned, that the books may be mailed as early and safely as practicable. In the cities mentioned, members will apply to Charles T. Carney, 138 Washington street, Boston; Henry Haviland, 23 John street, New York; Wm. Procter, Jr., Philad'a; William S. Thompson, Balti-

more street, Baltimore; W. J. M. Gordon, Cincinnati, and Eugene L. Massot, of St. Louis. Those members who have not paid their contributions to the Treasurer, Henry Haviland, 23 John street, New York, are requested to do so early to meet the expenses of publication.

The undersigned also takes this opportunity to say that all those Pharmacutists and Druggists who are eligible by the Constitution, who desire to become members *before or at* the annual meeting of 1861, at St. Louis, are requested to apply to the undersigned, and receive a blank Constitution for signature, and testimony, as preferable to postponing the application until the meeting convenes.

WILLIAM PROCTER, JR.,
Chairman of Executive Committee,
500 South 9th St., Philada.

Oct. 25th, 1860.

POISONOUS HAIR DYES.—Prof. Aikin sends us (as below) the address of the Physician who was called upon in the case (noticed in our July No.) of the death of a child from the careless use of a hair dye. Our Woodville, Miss., friend can learn all the particulars he desires by addressing his inquiries to M. K. Baldwin, M. D., Mt. Gilead, P. O., Loudon Co., Va.

Proceedings of the American Pharmaceutical Association, at the Ninth Annual Meeting, held in the city of New York, September 11–15, 1860, with the Constitution and Roll of Members. Philadelphia: printed for the Association by Merrihew & Thompson; pp. 296, octavo.

In glancing over this volume, we find the first sixty-four pages of the text devoted to the Minutes of the meeting held in New York in September last. The report of this meeting, through the aid of stenography, is much more complete than usual, and the Minutes of the Secretary have been interspersed with the reports of the discussions, so as to add much to the interest of their perusal. The discussion on the sale of poisons was partaken in by several members of the New-York Academy of Medicine, who were present by invitation.

The Report of the Committee on the Progress of Pharmacy, by Edward Parrish, Chairman, is a very bulky document,—occupying sixty-five pages. It commences with a brief notice of the several pharmaceutical organizations in the United States, of professional appointments, of necrological notices, of pharmaceutical literature, including catalogues of recent publications, and of general remarks on the drug market. The main body of the Report is occupied with brief references to papers in the European and American journals of the past year, on materia medica, pharmacy, inorganic and organic chemistry, and toxicology. The editor has added greatly to the practical value of this report by appending to the volume a special index of the authors and subjects of this Report.

The Report on Home Adulterations, by Charles T. Carney, the Chairman of the Committee on that subject, occupies about fifteen pages, and is chiefly devoted to the adulterations of food,—the Committee deeming such

as within their province. The subjects of drinking-water, mill yeast powders, and vinous liquors, chiefly occupy the Report, which speaks strongly against the use of lead pipes for water conduits into dwellings.

About twenty original papers follow these Reports,—most of them practical in their character. Three of these papers will be found in this present number, and will convey an idea of the general cast of the remainder. The longest paper is that of Dr. Donnelly on Cacao, of which substance the history, botanical and economical, are given, and it is illustrated with a very well executed lithographic figure of the plant and fruit. Dr. D. proposes, in another paper, to complete the subject by giving the full history of its manufacture and uses in medicine and dietetics.

The paper of Dr. Squibb, on Ethereal Oil, gives his experience in keeping that substance, with a rationale of the changes which occur in it, and the means of preventing its decomposition.

The paper of Prof. Thomas, on a new Garlic, gives a very satisfactory argument in favor of its being a hybrid between the Garlic and Leek.

John Faber's paper, on manufacturing Pharmacy, points out the duty of pharmacutists to watch their own galenical preparations, and gives an estimate of cost, of several kinds, to prove that they can be made cheaper than the market prices of the extracts manufactured on a large scale.

Dr. Pile's paper, on Dicas' hydrometer, is accompanied by tables, which will prove highly useful to those who have occasion to test this instrument.

Of the various other papers, the following may be enumerated: On Citric Acid, by C. T. Carney; on the production of Alcohol in the United States, by F. Stearns; on Paraffin as a substitute for wax in Cerates, by C. T. Carney; on the depreciation of Smyrna Opium, by P. Wendover Bedford; on Atropia from American Belladonna root, by William Procter, Jr.; on Hops and Lupulin, by Charlse A. Tufts; on Patents in their relation to Pharmacy, by Edward Parrish; on the preparation of Narcotic Fluid Extracts, by John M. Maisch; and on Powdered Camphor as a pharmaceutical preparation, as among the more prominent. None of the papers in this volume are very elaborate or very strongly marked, a fact owing to the character and moderate scope of the subjects treated. The work is well gotten up, and, though less in size than last year's Report, is creditable to the body from which it emanates.

The Physician's Pocket Memorandum for 1860, by C. H. CLEVELAND, M. D., Cincinnati, 1861.

This is another example of the Physician's Memorandum Book, containing about 87 pages of printed matter, useful to the practitioner as a reminder in emergencies, etc.

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